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ABSTRACT

A study examined the effect of the presence of older students in the college classroom on the attitudes and performance of college freshmen. Using a pretest-treatment-posttest format, researchers examined two sections of a second-semester freshman English class. One section was an intergenerational class composed of 14 college freshmen and 10 non-matriculating, for-credit students 60 years of age or older, and the other was a regular all-freshman class. Both sections studied composition and literature, using the life cycle theme as a central approach. The control group consisted of three sections of the same course, all comprised of college freshmen without the superimposition of the life cycle theme. Researchers used a student opinion questionnaire to measure participant attitude changes. Analysis of the data revealed that participation in the intergenerational class resulted in younger students' developing highly positive attitudes toward their own aging and toward intergenerational classes. In addition, rates of participation and general activity were higher in the intergenerational class. Comparison of the first and last essays written by the younger students in the two experimental sections indicated that both groups exhibited approximately the same degree of improvement. (A related bibliography/teacher's guide is available separately--see note.) (MN)

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ED213885

THE GRAYING OF THE COLLEGE CLASSROOM:

IMPACT OF OLDER PEOPLE AS PEERS IN THE CLASSROOM ON ATTITUDES AND ON PERFORMANCE OF UNDERGRADUATES

Report Submitted to the

NRTA-AARP Andrus Foundation

by

Barbara H. Jensen-Osinski,
Project Director

with

Peter G. Beidler,
Co-Investigator

Edwin J. Kay,
Co-Investigator

Judith L. Aronson,
Project Assistant

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September 30, 1981

Department of English, Lehigh University

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ABSTRACT

THE GRAYING OF THE COLLEGE CLASSROOM:

Impact of Older People as Peers in the Classroom
On Attitudes and on Performance of Undergraduates

The primary purpose of this study was to determine whether college freshmen's attitudes and performance would be affected by the presence of older students in the college classroom.

We were specifically concerned, first, with seeing whether the experience of participating in an intergenerational class, in which the life cycle theme was used as an approach to composition and literature, would influence freshmen's attitudes toward their own aging, older people as a group, and intergenerational classes. We also wished to learn whether participation in such a class would affect the older students' attitudes toward intergenerational classes, younger people as a group, and their own capacity for learning in a college environment.

In addition, the study was concerned with learning whether a mixed class composition would affect the amount and type of class activity in a discussion format, and whether younger students' performance on written essays would be affected by their participation in an intergenerational class.

A secondary concern was to determine whether students in an all-freshman class, studying the same subject as the intergenerational class, would exhibit changes in attitude toward their own aging and toward older people as a group.

The study utilized the pretest - treatment - posttest design. Two treatment groups were enrolled separately in two sections of second-semester freshman English: one an intergenerational class composed of fourteen college freshmen and ten non-matriculating, for-credit students 60 years of age and older, and the other a regular all-freshman class. Both sections studied composition and literature, using the life cycle theme as a central approach. The control group consisted of three sections of the same course, all composed of college freshmen, without the superimposition of the life cycle theme.

A Student Opinion Questionnaire containing five separate scales was used to measure attitude changes. The mean amounts of activity (participating, whispering, and laughter) per class period in the two experimental classes were compared to determine whether the two groups would

exhibit differences in these activities. The improvement in performance on essays written by younger students in the intergenerational class was compared with the improvement shown in essays written by students in the all-freshman class to determine whether one class would show more improvement than the other.

Analysis of the data revealed that participation in an intergenerational class, in which the life cycle theme was used as an approach to composition and literature, resulted in younger students' changing their attitudes toward their own aging and toward intergenerational classes. Attitudes moved in a positive direction in both of these dimensions; both changes were statistically significant. The younger students' attitude toward older people as a group, high to begin with, did not change. Older students' already positive attitudes toward intergenerational classes, younger people as a group, and their own capacity for learning in a college environment showed no change.

The rates of participation (talking aloud) and whispering per student per class period were significantly higher in the intergenerational class than in the all-freshman experimental group. The total amount of laughter per class session was also significantly greater. While the older students accounted for the higher level of activity in the mixed class, their active participation did not prevent the younger students in this class from participating at as high a rate per student as their counterparts in the all-freshman experimental group.

A comparison of first and last essays written by the younger students in the two experimental sections shows that both groups exhibited approximately the same degree of improvement from their first to their final essays.

Students in the experimental all-freshman class showed no attitude changes toward either their own aging or older people as a group.

Studying in an intergenerational class benefited younger students in several ways. Their anticipation of aging was modified to the point where they saw themselves in the future as capable, energetic, and admired older people. Their changed attitude toward intergenerational classes indicates that they found sharing the classroom with older students a valuable experience. The significantly greater amount of activity in the intergenerational group is another indicator of a high level of student interest in this class.

The myth that older students may deprive younger students of learning opportunity is rebuked by evidence from this study. Younger students in the intergenerational class participated at as high a rate as their counterparts in the experimental all-freshman class, and they showed at least as much improvement in their written work from the beginning to the end of the semester. The exchange between generations does more than help younger and older students understand each other; it provides a stimulating atmosphere for learning, one in which younger as well as older students benefit.

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It has been a stimulating and pleasurable experience to direct this project, not only because of its very nature, but because so many talented and hard-working people contributed to its success.

Co-investigators Peter G. Beidler, Professor of English, and Edwin J. Kay, Associate Professor of Psychology, provided expertise in their respective fields to make this a working interdisciplinary project. Dr. Beidler's practical advice on course design and literature selection was extremely useful; he efficiently coordinated the evaluation of student essays so that analysis could be carried out with ease. Dr. Kay gave essential technical advice on all experimental aspects of the study and wrote computer programs for all analyses of the data.

Project assistant Judith L. Aronson contributed substantially to the study in many ways, assisting in the design of the questionnaire, playing a major role in designing the observation coding system, serving as regular observer in the experimental classes, and performing all statistical analyses of the data. Throughout the study she has offered valuable, imaginative suggestions concerning experimental methodology. I could not have produced this report without her painstaking efforts, particularly in the drafting of results of analyses from the data gathered with the questionnaire and observation coding system, and in making the less formal observations on discussions of literature and final interviews with students.

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Barbara H. Jensen-Osinski
Project Director
September, 1981

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INTRODUCTION

Purpose

The primary purpose of this study was to determine whether the attitudes and performance of college freshmen would be affected by the presence of older students in the college classroom.

We were specifically concerned, first, with seeing whether the experience of participating in an intergenerational class, containing an approximately even mix of 18- and 19-year-old second semester college freshmen and students 60 years of age and older, and in which the theme of the life cycle was used as an approach to composition and literature, would influence younger students' attitudes in three dimensions: toward aging, toward older persons as a group, and toward intergenerational classes. We also wished to learn whether participation in such a class would affect the older students' attitudes toward intergenerational classes, younger people as a group, and their own capacity for learning in a college environment.

By observing and coding specific class activities, we wished to determine whether an intergenerational class composition would affect the amount and type of class activity in a discussion format.

In addition, the study was concerned with learning whether younger students' performance on written essays would be affected by their participation in an intergenerational class of this nature.

A secondary concern of the study was to determine whether, in a class composed entirely of 18- and 19-year-old college freshmen, the students' attitudes toward their own aging and toward older people as a group would be changed after they had participated in a composition and literature course in which the theme of the life cycle was used as a central approach.

The educational experiences tested in this study offered the participants a number of things. The older students, none of whom had a college degree and most of whom had little or no formal education beyond high school, could test their skills in a regular college classroom in which they were expected to perform, for college credit, on the level of college freshmen. They also had an opportunity to interact with younger students as peers in a college classroom. The younger students in the intergenerational class were able to test their ideas against the life experience of older students. They could interact socially with people of their parents' and grandparents' ages who were doing exactly the same academic work as they for this class. The instructor was given an unusual opportunity to find ways to use the composition of an intergenerational class to enhance learning for students in both age groups and to try to satisfy the needs of both groups through one course.

Specifically, this study addressed the following questions:

1. Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

2. Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

3. Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

4. Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in a regular college class with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

5. Will the college freshmen's attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

6. Will the older students' attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

7. Will the older students' attitude toward younger people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

8. Will the older students' attitude toward their own success in a college class be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

9. Will the amount and nature of class activity (participation, whispering, eye contact, and laughter) be different in the two experimental groups (the intergenerational class and the all-freshman class, both studying composition and literature with the life cycle as a central theme)?

10. In the intergenerational class, will the older students "take over"? That is, will they participate so much in class discussions that they prevent the younger students from participating at as high a rate as their counterparts in the experimental all-freshman class?

11. Will the younger students in the intergenerational class show more or less improvement than their counterparts in the all-freshman class in a comparison of their first and final writing assignments?

A concomitant purpose of the study, one for which our experimental methodology could provide no hard data, was to give some credence to two hypotheses: first, that older people, when placed in a regular college composition and literature course, do just as well as traditional college-aged freshmen and can do so without any more special attention or remedial help than regular freshmen receive; second, that the experience of studying in an intergenerational class can be a positive one for students in both age groups. To gather information that might help us make observations on these hypotheses and interpret the results of the Student Opinion Questionnaire, the project director (instructor) and project assistant (observer) made daily diary entries on student interaction and class discussions. In addition, the project assistant tape-recorded all class sessions of the two experimental groups and interviewed younger and older students in the intergenerational class.

As an integral part of the study, a freshman composition and literature course was designed, entitled "The Life Cycle in 20th-Century American Literature." This course was taught to the two experimental sections--an intergenerational class and an all-freshman class--as an illustration that the theme of the life cycle can be used as a meaningful and stimulating approach to teaching and learning both writing and literature. An annotated bibliography and teacher's guide, entitled The Life Cycle: An Annotated Bibliography, has also been written, based on the experience of designing and teaching this course.

Background and Need for the Study

Educators are now realizing that the future population of colleges and universities is likely to include higher proportions of older people than ever before because of shifts in the population. As the number of young people decreases, educational institutions may need to change their focus to include older persons as a larger part of their constituency; research on the effects of intergenerational classes on attitudes and performance of regular undergraduates, on attitudes of older persons, and on classroom activity could provide them with data on what to expect in an intergenerational student body.

Because each succeeding cohort of older persons is better educated than the last, older persons who enroll in future college classes may be

expected to demand less of the traditionally recreational "adult education" curriculum and more of the intellectual rigors of regular college classes. At this time, however, colleges and universities are prone to the same ageism that pervades most of American society. Most educational programs that include older adults are "informal, noncredit, short-series courses that attempt to keep pressure and anxiety at a minimum. . ." (Peterson, 1978). Eighteen- to 21-year-old college students normally live, study, and enjoy friendships only with people of their own age group. And college literature courses, while focusing on a variety of themes concerning the human condition, usually ignore aging as a theme that might help students enter into the essence of a work of fiction.

As the population changes from a younger to a relatively older one, it will be necessary for people of all ages to become increasingly sensitive to the complexities of aging and the differences among people within each age group. It has already been shown that studying aging in educational programs designed to change attitudes toward aging and older people can affect measurably the attitudes of adolescents and small children (Glass, Trent, and Crockett, 1977, Glass and Trent, 1978, and Glass and Trent, 1980). A growing concern about young people's attitudes toward aging and older persons is evident both in current research on attitudes and in the trend toward including units on aging in curricula for elementary school, junior high school, and senior high school students. At the same time, the social sciences are beginning to focus on the subject of aging in college level courses, and some colleges and universities are offering more courses for older people at reduced or no tuition, bringing older and younger people together, if not as peers in the college classroom, certainly as fellow students on campus.

While there is a large body of experimental literature on attitudes toward older persons, it is only in the past few years that changes in these attitudes have been examined in depth. Little experimentation has been done on younger students' attitudes toward intergenerational classes. Neither is there much information on the effects of intergenerational learning situations on the performance on younger students, or on class activity. We do not know much about the effects of an intergenerational classroom on older people themselves.

This study was designed to measure changes in attitudes <u>not</u> as a result of a course or series of intergenerational contacts set up specifically <u>in order to</u> change attitudes, but as a result of two treatments that may or may not have changed attitudes.

First, the course in composition and literature was primarily that: a freshman composition and literature course that employed the theme of the life cycle as a key for unlocking discussion and writing topics inherent in the literature that students read for class. While the works of literature for the course were selected on the basis of their appropriateness to the life cycle theme, the course was not designed as an informational class to educate students about aging, nor was it taught for the purpose of changing students' attitudes. The students' main

objective was to improve their writing skills and to gain enough sensitivity to the works of literature to be able to write intelligently about them in their essays.

Second, the placement of ten older adults as for-credit students in a regular second-semester freshman English class was not designed as a "positive experience with older persons" for the younger students. The older students were selected, from among twenty-five applicants for a scholarship for this course, based on the fact that their writing skills and level of formal education were approximately those of a freshman entering the second semester. They were not chosen for their personality traits or talent for getting along well with younger people.

Because this study was designed essentially to learn something about what happens when younger and older students find themselves together as peers in the college classroom, it was critical that no effort be made to create a "positive" series of contacts that might bias the results. The course was given, the mix of generations was there from the first day of class, and the theme of the life cycle was used simply as any other thematic approach might be used to teach composition and literature.

The assumptions underlying this study were:

1. That older adults
   - (a) Seek and respond well to intellectual challenge;
   - (b) Wish to be treated the same way in the classroom as their younger counterparts;
   - (c) Can succeed in a regular college class without any more special attention than regular college students receive;
2. That 18- and 19-year-old college freshmen
   - (a) Welcome contact with older persons if such contact comes as part of the academic routine;
   - (b) Have some interest in testing their own ideas against the experiences of older adults;
3. That in a discussion format, a high level of student participation is desirable;
4. That an intergenerational classroom experience can be a highly positive one for both age groups.

Limitations

The following factors were considered limitations in this research project:

1. The research design included three groups of students: the two experimental classes, and three non-experimental classes that together were considered the control group. Under ideal conditions, the design should have been a 2 x 2, one intergenerational class taking the course using the life cycle theme and another intergenerational class simply taking the regular second semester composition and literature course. If we had not been working under economic constraints, we would have conducted the experiment using the 2 x 2 design. Because of budgetary limitations, the study could include only ten older students (all of whom were given scholarships). The older students were placed in one of the two experimental classes in which the life cycle theme was used as an approach to the subject matter. This class, then, received two treatments: the imposition of the life cycle theme plus an intergenerational class composition. It is impossible to differentiate between the effects of the two treatments, and so the study deals with the results as stemming from the combination of treatments.

2. The intergenerational class contained ten older students and 14 younger students; the all-freshman experimental class contained 21 students. The control group consisted of 55 freshmen. Because of the extremely small population tested in this experiment, the study does not pretend to be able to generalize from the experimental data. This study might be considered a pilot for future studies on the effects of intergenerational learning situations on the attitudes and performance of students.

3. The study was based on the experience of one particular kind of course: a second-semester freshman composition and literature course in which class discussion was the primary format. It is impossible to predict what might happen if the generations were mixed in an exclusively lecture-type course or in a strictly quantitative one.

4. The two experimental classes were taught by the project director, who has had considerable experience working with older persons in a variety of contexts. Because most college instructors are accustomed to teaching a relatively young student body, they may not respond as easily to an intergenerational mix as the instructor did in this case. However, while this instructor's familiarity with older persons' interests and needs may present a bias in the experiment in that such sensitivity is not typical of college instructors, her sense of security about the elders' abilities allowed her to treat older and younger students equally in the classroom, thereby creating a situation that can be duplicated if instructors can be persuaded that it is possible.

5. Because the younger students initially possessed such positive attitudes toward older persons, and because the older students began the semester with such positive attitudes toward younger students and studying in a college classroom, the "ceiling effect" must be acknowledged as a possible influence on any attitude change or lack thereof.

CONCEPTUAL FRAMEWORK AND REVIEW OF THE LITERATURE

Effects of Groups on Attitudes

In studying the effects of participation in an intergenerational class on younger students' attitudes toward their own aging and older people as a group, as well as on older students' attitudes toward younger people as a group, we based our research on the belief that active group participation can be an effective avenue for attitude change in the affective component. According to Triandis, the "affective component of attitudes is characterized by the presence of positive or negative emotion . . ." (Triandis, 1971). Lewin's (1947) study of the effectiveness of group discussion compared to individual instruction showed that effective group participation can lead to attitude change. Zimbardo and Ebbesen (1969) also found that "audience participation (group discussion and decision-making) helps to overcome resistance" to change in attitude.

We anticipated that some attitude changes might occur in the positive direction because the course used a discussion format, focusing on students' writing and on literature. While the course was not an informational course on "aging" as such, we felt the regular exchange of ideas among young and old might lead to changes in the affective component of attitude in the three dimensions listed above. This idea finds support in Siegel and Siegel's (1957) study of reference groups, membership groups, and attitude change. Kiesler (1978) defines "reference group" as "any set of individuals with whom we have some psychological involvement; actual membership is not required." She defines "membership group" as "any set of individuals with whom we are classified according to some objective criteria of similarity; psychological involvement is not required." Siegel and Siegel (1957), in a study of women students' attitudes toward a selection of living arrangements, examined "the attitude changes which occur over time when reference groups and membership groups are identical and when they are disparate." They found that attitude change in the subjects "was a function of the normative attitudes of both imposed membership groups and the individuals' reference groups. The greatest attitude change occurred in subjects who came to take the imposed, initially nonpreferred, membership group as their reference group."

By studying together as peers in a regular freshman English class, younger and older students might have begun to see themselves as more similar to than different from each other and we might see affective changes in a positive emotional direction toward each other as groups. Younger students might also have begun to view their own aging more positively. The intergenerational class, designated by Lehigh's Department of English as "English 2-D," was an imposed membership group. If students began to see this class as a reference group as well, then attitude changes might be positive.

Since our study concentrated mainly on the affective component of attitude, and since the course content was not aimed at changing the cognitive component, it was not likely that the younger students in the

experimental all-freshman class would show significant change in attitudes toward older people as a group or toward their own aging.

Attitudes Toward Aging and Toward Older People as a Group

The present study used a questionnaire containing five scales, one of which (Scale 1) measured attitude of students toward their own aging, that is, the process of aging, while a second scale (Scale 2) measured attitude toward older people as a group. Because numerous studies have already been made of young people's attitudes toward older people and fewer have been made of their attitudes toward their own future (aging), we were particularly concerned with the latter as measured by our Scale 1.

Tuckman and Lorge (1956), Kastenbaum (1959), and Kuhlen (1948) found that when young people consider their life span in terms of the happiest period, they see their later years as relatively unattractive. They also tend simply not to think of their later years at all. Bennett and Eckman (1973), in an examination of literature on attitudes toward aging, found that most studies indicated a negative view of aging on the part of both young and old. In a study by Jantz, Seefeldt, Galper, and Serlock (1977) it was found that "most children do not perceive their own old age as positive" and that they "do not perceive the aging process as positive."

Perlin and Butler (1962) studied elderly patients at Cushing Hospital to determine whether patients who considered themselves "old" were better adjusted than those who considered themselves "not old." They found that those who considered themselves "old" tended to be better oriented than those who did not. They found, too, that those who considered themselves old at the time of the study had had a more extensive outlook on their own futures when they were younger than those who did not consider themselves old. The patients who saw themselves as old had a more negative and unsure view of the future than that expressed by those who called themselves "not old." Kastenbaum and Durkee (1964) conclude that "elderly people who classify themselves as 'not old' tend to show more psychiatric symptoms than those who classify themselves as 'old.'" However, in a study by Reichard, Livson, and Petersen (1962) of 87 elderly men, there were "accepters" and "rejecters" of old age among both well-adjusted and poorly-adjusted groups.

If the ability to project into one's later years is associated with later acceptance of being old and a relatively high level of adjustment, then younger people's capacity for seeing their own later years as positive might be considered a step in the right direction toward successful aging. We were, of course, interested in seeing change in a positive direction on our Scale 1, Younger students' attitude toward their own aging.

According to Powell and Arquitt (1978), "only minimal data are available concerning attitudes toward youth among older adults." However, attitudes toward older persons, on the part of all age groups, have been studied extensively over the past three decades. Students' and other

young people's attitudes have been studied by Aaronson (1966), Axelrod and Eisdorfer (1961), Bekker and Taylor (1966), Britton and Britton (1970), Brockman (1969), Drake (1957), Eisdorfer (1966), Fletcher et al. (1971), Glass and Trent (1978), Glass and Trent (1980), Glass, Trent, and Crockett (1977), Golde and Kogan (1959), Gordon and Hallauer (1976), Holzman, Beck, and Coggan (1978), Ivester and King (1977), Kogan (1961a), Kogan and Shelton (1962), Perril (1963), Porter and O'Connor (1978), Rosencrantz and McNevin (1969), Seefeldt, Jantz, Serock, and Galper (1977), Thomas and Yamamoto (1975), Thorson (1975), Trent, Glass, and Crockett (1979), Troll and Sehlossberg (1970), and Tuckman and Lorge (1952, 1953, 1954, 1958). Rosow's (1962) statement is held as true by many researchers: "By now it should be clear that the crucial people in the aging problem are not the old, but the younger age groups, for it is the rest of us who determine the status and position of the older person in the social order."

Attitudes toward older people as a group have been found to be predominantly negative in most studies. Britton and Britton (1970) found that university students felt that middle-aged persons tended to be careful, competent, helpful, dependable, and cautious. They seemed to see young adults as healthy and good-looking, and older people as rigid. Given the results of their study, Britton and Britton indicate that these findings might have an impact on intergenerational relations.

Rosencrantz and McNevin (1969), comparing the attitudes of college students who have close contact with grandparents, a meaningful relationship with another older person, contact only with older people in hospitals, and little or no contact with older persons, found that those who have frequent meaningful contact with grandparents or other older people have a more favorable attitude toward older people than do those who have little or no contact. Those who had only hospital contact tended to make more negative evaluations of older persons. In contrast to the Rosencrantz and McNevin study, Drake (1957) and Thorson (1975) found no effect on attitudes of college students toward older persons resulting from having living grandparents.

Several researchers have investigated attitude change in students as a result of course work in gerontology, contact with older persons, and a combination of these. Seefeldt, Jantz, Serock, and Galper (1977) studied the effectiveness of a curriculum designed to foster positive attitudes in children (k through 6) toward older people. The study revealed that the curriculum did in fact contribute to altering the attitudes of children toward the elderly. In four separate research projects at North Carolina State University (Glass and Trent, 1978, Glass and Trent, 1980, Glass, Trent, and Crockett, 1977, and Trent, Glass, and Crockett, 1979), researchers found that the attitudes of children and adolescents, respectively, can be significantly altered through educational experiences specifically designed to change attitudes in as short a period as six weeks. The 1979 study showed that adolescent 4-H Club members' attitudes could be changed through participation in any of three experiences: a series of seminars dealing with aging, in-depth interviews with older adults, and a combination of these.

Studies by Tuckman and Lorge (1954), Troll and Schlossberg (1970), and Fletcher et al. (1971) indicate that courses in gerontology alone do not seem to cause significant changes in attitudes toward the elderly. Holzman, Beck, and Coggan (1978) studied the effects on medical students of participation in one of two geriatric educational experiences: family practice clerkship and selective course in medical humanities. They found that both experiences ended in positive changes in general attitudes, but that the family practice clerkship, which emphasized empathy toward elderly patients together with observation of healthy older persons, produced more positive feelings about the rehabilitation potential of the elderly. In another study, Porter and O'Connor (1978) found that university students' attitudes could be changed through participation in an experiential course in which they are paired with older "consultants."

Gordon and Hallauer (1976) studied the effects on college students of an adult development course alone, and of the same course accompanied by visits to elderly persons. Using Kogan's O.I. Scale, they found that "while the course alone significantly altered the students' attitudes toward the aged, friendly visiting in addition to the course had an even greater effect. Friendly visiting alone (without the benefit of a course on aging), however, did not substantially improve the students' attitudes." In response to open-ended questions about their experience, students who had participated in friendly visiting and in the course in aging reported highly positive changes in attitude.

The present study is similar to the Gordon and Hallauer study in that we are interested in attitude changes in two groups of students: one group receiving a simple course treatment (course in composition and literature with the life cycle theme) and the other receiving the same course treatment plus contact with older persons. One important difference is that in the present study the course itself was not an informational course on aging as such; another important difference is that the presence of older students in the classroom was intended as an experiment in which older and younger persons encountered each other as peers in the same class, as opposed to the situation created in the Gordon and Hallauer study, in which younger students visited the elderly in an attempt to bring them friendship. In the present study, no conscious attempts were made by the researchers to create a "friendly" or positive atmosphere any more than such attempts are made in any discussion-type college class.

Ivester and King (1977), finding that "frequency of contact apparently had no direct effect on attitudes toward the aged . . .[recommended that] future research should attempt to do more than analyze the effect of mere contact with aged. A measure of the quality, in addition to the quantity, of contact would add to the present knowledge of what affects formation of attitudes toward the aged." The present study, while not actually measuring the quality of the contact, does measure the changes in students' attitudes after treatments of an entirely different sort than those used in the above-mentioned studies. It is our belief that if people of different age groups find themselves thrust together in the same situation, they may begin to see each other as peers. If the experience is a positive one, the membership group may become a reference group for them, and attitudes may change in a positive direction.

Intergenerational Classes

Powell and Arquitt (1978), after completing five studies "focusing on intergenerational interaction and its effects" and surveying the literature on intergenerational activities, conclude that "intergenerational interaction tends to soften or significantly change negative stereotypes and attitudes of one group toward the other." In one study, twenty retired persons aged 55 through 87 attended summer school at Oklahoma State University, living in residence halls, eating in the cafeteria, and taking courses with the younger students. A group of college students, called "surrogate grandchildren," were included in the program to insure contact between generations. After the experience, perceptions of the other generation were significantly improved in students of both age groups (Steichen and Arquitt, 1975).

Helling (1972) describes the start of a program for older persons at North Hennepin State Junior College in which the regular students accepted the older students and one of the most popular courses was a "rap session" involving both age groups.

Covey (1980), in a survey of older people who attended continuing education classes through a Senior Auditor's Program at the University of Colorado, found that most older persons preferred age-integrated classes; 66% answered that they would prefer to be in classes with people of other age groups; 9.5% said they preferred to be in class with other older students only; 18.4% had no preference. More than 63% had a strong or very strong preference for classes designed to encourage older students to participate in intellectual, social, and recreational activities with younger students. The reasons older people gave for their preference of integrated classrooms varied: they were generally against age segregation and did not wish to spend all their time with people of only their own age group; they found it difficult to adjust to not being with younger persons; it seemed impractical not to share classrooms with persons of other ages, given the high cost of education; it was possible that not enough older persons were interested in any given course; they felt there was no need to have a special program for older persons.

It appears that little research has been done on the effects on older students of participating in college classes, particularly when they find themselves in the role of peers, that is, for-credit students performing exactly the same work as the "regular" college students. The attitudes of younger students toward intergenerational classes has received relatively little attention, and the effects of participation in this kind of class on younger students' performance has likewise been neglected. We know very little about the quality of life in the classroom when the generations are mixed. The present study is concerned with all of these issues. As Peterson (1978) states,

> Much of the evaluation currently conducted on educational activities is limited to assessments of the happiness of participants and the number of people in attendance. The future is likely to see this evaluation supplemented by more refined measures of outcomes that can be quantified to indicate the results of the programming.

METHODOLOGY

The Research Design

In this study, two experimental groups of 18- and 19-year-old college freshmen were compared with a control group drawn from the same population. A group of ten older students was also studied. All students in the study were enrolled in Lehigh University's English 2, a second-semester freshman composition and literature course in which students learn writing skills while studying literature of various genres (short story, novel, drama, and poetry). To help explain the research design, we have assigned Roman numerals to all groups studied in this project. In subsequent sections of this report these same groups are referred to descriptively rather than by Roman numerals.

Group I consisted of the 14 freshmen in the intergenerational class (a class which also included ten students 60 years of age and older). Group II consisted of the 21 freshmen in the all-freshman experimental class. Groups I and II were enrolled in two separate sections of English 2 in which the theme of the life cycle was superimposed as a treatment. The theme was used not for imparting information about or changing attitudes toward aging and older persons but as an approach to literature and as a teaching tool with which to open stimulating discussion and suggest writing topics for students. Group III consisted of the 55 freshmen enrolled in the three other sections of English 2, in which this particular theme was not used.

Group IV consisted of the 10 older students enrolled in the intergenerational class with Group I. No comparisons could be made between Group IV and any other group because there was no similar population in the study.

Attitude changes in Groups I, II, and III, as shown in a pretest and posttest of a Student Opinion Questionnaire (administered at the beginning and end of the semester) were compared as follows: Attitude changes on three scales--students' attitudes toward their own aging, toward older people as a group, and toward intergenerational classes--were compared between Group I and Group III, and between Group II and Group III.

Attitude changes in Group IV were simply analyzed for significance on three scales--students' attitude toward intergenerational classes, toward younger people as a group, and toward their own capacity for success in a college classroom. The amount and nature of class activity in the intergenerational class (combined Groups I and IV) were compared with those of Group II. Data for this comparison were gathered by an observer who coded students' participation in class discussion, whispering between students, and laughter by the class as a whole in each of the two experimental sections. The all-freshman experimental class (Group II) served as a control group for the intergenerational class (combined Groups I and IV) for this part of the experiment.

The amount of participation in class discussion per younger student per 75-minute class in the intergenerational class (students in Group I)

was compared with same data per student in Group II. Group II served as a control group for Group 1 in this part of the study.

The degree of improvement from the first essays to the last essays written by younger students in the two experimental groups was studied to determine whether Group I and Group II would differ in improvement of writing skill from the beginning to the end of the semester.

(Groups I through IV will be referred to descriptively rather than by number in subsequent sections of the report.)

Population

The population for this study consisted of 90 18- and 19-year-old Lehigh University freshmen and ten older adults, 60 years of age and older, from the local community, all enrolled in the same course, English 2.

(a) Younger Students:

All Lehigh freshmen are required to take a composition and literature course in their second semester. They are given a choice among five courses. One focuses on the short story, one on drama, one on film, and one on the novel. All the freshmen in the study chose English 2 over the other four options because it includes a variety of genres: the short story, the novel, drama, and poetry. They were placed randomly in five sections by a computerized system; none of them were aware that two sections would be "experimental" in any way before the semester began.

In order to insure that the freshmen in all five sections could be considered a homogeneous population in terms of initial attitudes, the pretest results of the Student Opinion Questionnaire were compared. There were no significant differences among the groups (see RESULTS, Analysis of Student Opinion Questionnaire).

(b) Older Students:

Since the basic objective of the study was to learn what happens when older and younger people are brought together as peers in a college classroom, every effort was made to recruit older students whose levels of writing skill and formal educational background were as close as possible to those of Lehigh freshmen who have passed English 1 and are enrolling in second semester freshman English courses. The only formal requirement was a high school education or its equivalent. In order to insure that we were drawing applicants from a broad base, Lehigh's Office of Public Information issued a press release to all local newspapers announcing scholarships for ten persons 60 years of age and over to take English 2. Two sample newspaper articles are attached as Appendix A. Area Agency on Aging staff in the surrounding counties spread the word to older people in local educational programs.

Thirty-two people called before applications were closed, and eight others called after the closing. All were told the nature of the course, selection criteria, and that the course was to be given for credit (not open to auditors). All the applicants were enthusiastic, and many of them volunteered information about their backgrounds and their interest in writing. Reasons for wishing to enroll varied: one man failed freshman English when he was in college and wanted to "prove" that he could write; a woman who loved to read wanted an opportunity to talk with other people about good books; another man wanted to know "what young people are thinking about these days." One man said, "Life is an adventure, and when an opportunity like this arises, I can't afford to let it go by. I'm going to do my darndest to get into this class!"

Twenty-five of the 32 applicants returned completed application forms. The main purpose of the application form (attached as Appendix B) was to pose questions that applicants could answer from their own personal experience, providing us with writing samples. Applicants were asked to select two out of three questions and to answer each with one or two short paragraphs. All writing samples were reviewed and rated on a scale from one to ten. With aid of a chart containing the names of all applicants, notes on their writing characteristics, writing sample ratings, information on applicants' educational backgrounds, and additional information that some had volunteered, the selection was narrowed according to level of educational background and writing skill. Five people clearly were not prepared for English 2; they needed better writing skills before entering a class at this level. Six other people were eliminated because their educational backgrounds included writing classes at least as difficult as this one. Of the 14 remaining applicants, ten were selected for acceptance and four were designated as alternates. Only one substitution was necessary.

All the older students on the final list were formally accepted as for-credit students in Lehigh University's General College Division, with scholarships for this particular course. (The General College Division allows students to take courses for credit without becoming part of a matriculating class.) Of the final ten, six were women and four were men. Ages ranged from 60 to 79; all but one of the older students were in their 60s.

In order to familiarize the older students with the campus, their privileges as students, what to expect in the course, and how to use the libraries, book store, and other campus facilities, they were given a one-day orientation program. Time was also set aside on that day for open discussion of back-to-school anxieties, study habits, and other concerns. This orientation program helped the older students enter the class as peers.

Course Design

(a) Similarities with Other Sections of English 2

The two experimental sections participated in a course very similar in content and format to the other three sections of English 2. The major focus in all five sections was on learning to write better; the second important focus was to learn to read and appreciate literature representing a variety of genres: the short story, the novel, drama, and poetry. A thematic approach was used in four of the five sections; the life cycle theme was used in only the two experimental sections. One of the three sections making up the control group studied the literature from a generic approach; that is, the instructor organized and taught the literature in segments representing one genre at a time.

All sections met twice a week, and all were required to write five essays, take two examinations (a midterm and a final), and complete various short written assignments. All instructors used a discussion format as the primary teaching method, encouraging students to contribute to discussion for purposes of mutual discovery of writing problems and human issues found in the literature. Another similarity, not planned, was that all five sections were taught by women.

The course content of the two experimental sections differed from the other three sections only in that the theme of the life cycle in 20th-century American literature was used as an approach to the literature and writing assignments. The students in these two sections studied literature that focuses on aging as a process that begins at birth and continues throughout life. The instructor used exactly the same syllabus for both classes and used the same teaching methods in comparable class sessions.

(b) Life Cycle Theme

Because the "life cycle" theme is broad, encompassing a vast number of works of literature, it was defined for purposes of the course in terms of three important elements of the aging process: growth, mortality, and continuity. Unless a piece of literature dealt effectively with at least one of these elements, it was not included. The course was organized into three broad groupings according to the ages of major characters--youth, middle age, and later adulthood. All of these groupings included works that illuminated growth, mortality, or continuity (or a combination of these).* The course syllabus is shown in Appendix C.

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*As an outgrowth of designing and teaching this course, the project director has written and edited an annotated bibliography for college and secondary school instructors planning to teach 20th-century American literature using the life cycle as a theme. This publication, entitled The Life Cycle: An Annotated Bibliography, contains some suggestions based on the Lehigh experience as well as a list of works from which instructors can make selections for their own courses.

In order to deal with growth, the classes studied literature illuminating those crisis points at which characters are awakened to a particular reality that disturbs their previously comfortable state of mind and forces them to respond by facing a new phase of life. Such crisis points occur throughout the life cycle, bringing with them important changes that signify aging. Florida Scott-Maxwell (1979) describes this part of the aging process very well:

> I often want to say to people, "you have neat,
> tight expectations of what life ought to give you
> but you won't get it. That isn't what life does.
> Life does not accommodate you, it shatters you.
> It is meant to, and it couldn't do it better.
> Every seed destroys its container or else there
> would be no fruition."
> But some wouldn't hear, and some would
> shatter themselves on principle.

Some examples of works of literature that focus on shattering experiences signaling the kind of growth Scott-Maxwell writes about are "Pale Horse, Pale Rider," by Katherine Anne Porter, "The Sorrows of Gin," by John Cheever, The Moviegoer, by Walker Percy, "The Ice Palace," by F. Scott Fitzgerald, and "Swamps," by Joyce Carol Oates. In these pieces young, middle-aged, and elderly characters grow and age in some way as a result of coping with crisis.

Other literature examines the implications of human mortality. Frequently, a particular occurrence such as a birthday or reunion, the death of a family member, or simply the way someone looks at a character brings on an acute awareness of the brevity of life. Though a keen sense of mortality often elicits strong negative responses, characters also may find life sweeter and more intense when they awaken to its limitations. Works that focus on mortality include A Streetcar Named Desire, By Tennessee Williams, That Championship Season, by Jason Miller, A Death in the Family, by James Agee, "Tell Me A Riddle," by Tillie Olson, and "Neighbour Rosicky," by Willa Cather.

The continuity of the unique central consciousness of individuals serves as a source of strength for characters who experience change, growth, and a sense of their own mortality. As Scott-Maxwell (1979) wrote at the age of 85, "I am myself as never before. . . ." In order to help students appreciate this aspect of aging, works of literature were included that illuminate characters' recognition (or lack of recognition) of continuity. Such insight often occurs when characters see themselves in other generations, as illustrated in these lines by May Sarton (1978):

> I live like a baby
> Who bursts into laughter
> At a sunbeam on the wall,
> Or like a very old woman
> Entranced by the prick of stars
> Through the leaves.

In this poem the speaker expresses her own central consciousness as one who, sensing visions of the infancy of her past and the old age of her future, remains the same inner person, seeing light in her own unique way. She clearly recognizes continuity within her own aging experience.

In all of the works listed above, the central characters who undergo changes retain their integrity because of their strong inner core. The continuity of their own special consciousness actually makes successful change possible and sustains them when change is for the worse. Some works, on the other hand, point to the importance people attach to continuity found in the recognition of one person's central consciousness by someone else. This kind of recognition can serve to counterbalance the fact of mortality, making it possible for a character to survive in the memory of another or giving an older character the reassurance that something he knows personally also lives on in a younger person. Works that focus particularly on continuity might include, for example: Katherine Anne Porter's "Old Mortality," John Cheever's "The Swimmer," Sarah Orne Jewett's "The Foreigner," John O'Hara's "Over the River and Through the Wood," and Saul Bellow's Mr. Sammler's Planet.

The course dealt with these three inherent parts of aging--growth, mortality, and continuity--at all stages of life--youth, middle age, and later adulthood. Works were chosen for each life stage so that students were exposed to a coherent and balanced picture of the life cycle.

While each piece of literature students read developed at least one of these three themes, and while the instructor pointed them out and often directed class discussion to illuminate one of them, there was no attempt to teach about "aging" as such. The course might be classified as a very indirect approach to the subject of aging, in that the literature was allowed to speak for itself and the students to respond from their own experience and emotions rather than using any piece of literature as an "illustration" of what getting older is all about.

The instructor did, however, make an attempt to avoid literature that stereotyped any age group. For example, in the latter third of the semester the classes read Seize the Day, by Saul Bellow, in which a stern elderly physician reprimands his slovenly, pathetic, middle-aged son for not pulling his life together. They also read "Neighbor Rosicky," by Willa Cather, a story that depicts a warm, loving relationship between an elderly farmer and his adult and teen-aged sons. They read "Asphodel, That Greeny Flower," by William Carlos Williams, a poem in which the author, in his late years and sensing his own mortality, pleads with his wife to forgive him his many sins and to renew the love they had when they first married.

Because so much literature about older people deals with mortality and physical and mental decline, it seemed important to find literature that gave a more balanced picture, and to bring out in class discussion the growth of character and the continuity of the central core of a person in the face of mortality. On one occasion a professor visited both classes to

read poetry about growing older. He chose a selection of well-known poems that depicted nearly every negative stereotype of old age--loneliness, false moral superiority, foolishness, weakness, decline of both mental and physical capacities, and deep depression. The poems included the following:

"A Leaf Treader," by Robert Frost;
"Loveliest of Trees, . . ." and
"When I was One-and-Twenty," by A. E. Housman;
"The Veteran," by Dorothy Parker;
"Miniver Cheevy" and "Mr. Flood's Party," by
E. A. Robinson;
"My Papa's Waltz," by Theodore Roethke;
"All the World's a Stage" and Sonnets 64 and 65,
by William Shakespeare;
"Fern Hill," by Dylan Thomas.

While the older students in the intergenerational class challenged the negative view of aging, the students in the all-freshman class were not in a position to contradict the words of the poets. If the instructor had not brought out their emotional responses and actually discussed stereotypes, they might have simply taken the poetry at face value in terms of the poets' views of older people and growing old.

The visiting professor's selection represents the kind of literature people often think of when they think of "aging in literature." When an older student asked the professor why the view was so negative, his very sensible response was that most of the poets wrote these works when they were young and did not know any better. They were, themselves, afraid of growing old.

The circle is a vicious one. Because people associate aging with decline, this sort of literature simply reinforces their feeling. And because great literature is "untouchable" to many people, it serves to perpetuate stereotypes. For example, when people are asked for suggestions of works that deal well with the subject of aging, many respond, "Try Willy Loman, of Miller's Death of a Salesman." Willy Loman is thought of as the epitome of the aging man: pathetic, lonely, lacking in self-respect, fearful of retirement, a man with no future. But Willy Loman has always been a pathetic person. He no more represents aging than he does youth. He is pathetic because of who he is, not because of the time of his life. Of course, the time Miller selects to show us this man is important because it is at this stage of life that Loman reveals his true self most poignantly. The mask falls off and we see him as he is. The instructor resisted using this play, however, because Loman fits too well into the stereotype people like to believe, and a lazy reading of the play can simply reinforce the negative view.

So, while this was not a course on "aging," there was an attempt to give students a broad selection of perspectives on people of all age groups, based upon the conviction that all three phenomena--growth, mortality, and continuity--are important at all stages of life. The stereotypical view, which has been challenged by Erik Erikson, is that growth occurs only in youth, that continuity of what one has "grown into" is to be expected throughout middle

age, and that mortality is the chief concern of the elderly. Because writers are often imprisoned by these misconceptions until they reach old age, literature reflects the stereotypes; it is difficult to locate works of literature that represent a good cross-section of views.

Students were asked to consider their own feelings about characters of different ages; they also were asked to place themselves in the shoes of people in the literature, partly in order to become involved in the work of literature and partly to have a chance to view themselves at various stages of life. For example, the first essay assignment was to compare an experience from their own youth, in which their own perception changed, to one of Miranda's experiences in Katherine Anne Porter's "Old Mortality," in which Miranda's perception changed. For class discussion of Jason Miller's play, That Championship Season, students were asked to imagine themselves in the position of one of the characters; they spoke from that character's point of view, telling what he was like as a boy, what he had lost, what he could and could not face, and how he felt at a particular moment in time. (All three themes emerged nicely from this class session: failure to grow, a sense of mortality, and continuity of central personality, all in 40-year-old men.) As the final essay assignment, students wrote an essay about a person over 65: either themselves as they project into the future (or as they are, in the case of the older students) or a person they know well.

But even though students imagined themselves in the roles of people of different ages, no emphasis was placed on whether it was "right" or "wrong" to see a person in any particular way. Because the main subjects of the course were composition and literature, the topics assigned were intended mainly as food for thought so that students would have something meaningful and stimulating to write about; the instructor was more concerned with their capacity to express themselves than with the point of view expressed. Students' grades suffered if they misread the literature, but they certainly were not penalized for any particular view of a character of any age.

Ethics

In order to insure that students in this project were treated ethically and that, at the same time, the integrity of the research was not destroyed, the merits of telling students about the project were weighed against those of keeping the entire experiment "secret." We believe we arrived at solutions that satisfy the requirements of the research without taking undue advantage of student subjects. The same ethical questions were relevant for the pilot of the Student Opinion Questionnaire as for the actual experiment.

(a) Ethics for Piloting the Questionnaire

Two versions of the questionnaire, one for younger and the other for older students, were piloted in the fall, 1980. The older students' version (Version x) was piloted with two groups of older adults from a community college class and senior center. The younger students' version (Version y) was piloted with a "subject pool" of Lehigh University psychology and social relations students who, as part of a standard course requirement, choose

either to participate in experiments or to write a paper. An Ethics Committee in Lehigh's Psychology and Social Relations Departments oversees all testing to insure that researchers provide the students with some educational experience in return for the students' help in testing their instruments. (The ethical decisions made concerning piloting the questionnaire with the younger students applied equally to the older persons who assisted in the pilot.)

The project assistant conducted all pilot tests. Before administering the questionnaire, she made a practice of reading aloud the oral instructions (see Appendix D), which also refer to and include the written instructions on the questionnaire (see Appendices E and F). She asked people who completed the questionnaire to give their names and addresses if they wished to receive a copy of the abstract of the final report of this project. Questionnaires were filled out anonymously; subjects were asked only for age, sex, and identifying numbers. After completing the pilot questionnaire, each subject received a slip of paper containing the following statement:

> The reason you have been asked to complete this questionnaire is that we are interested in finding out how well it measures attitudes toward your own aging process, younger and older persons as groups, your own capacity for learning, and intergenerational classroom situations. We want to find out whether or not the response to each item on the questionnaire does in fact indicate a positive or negative attitude to one of these phenomena. By filling out the form, you have helped us to make this determination.
>
> If you would like a copy of the abstract of the final report of our research project, please give us your name and address. Thank you very much for your assistance.

(b) Ethics in the Experiment

In order to minimize the biasing of experimental results due to students' sensing that they were part of a "special project," some deception was necessary. However, since the students in the two experimental sections surely noticed that their classes were somewhat different from those of their fellow freshmen, and since the ten older students were already aware that their inclusion as scholarship students in one section of English 2 constituted a departure from Lehigh's regular procedure, it was also necessary to provide some information to allay students' concerns.

On the first day of class, one member of the advisory group administered the pretest of the Student Opinion Questionnaire separately to all five sections of English 2. To explain the questionnaire, she said that the Department of English had undertaken a project involving a new approach to English 2, in which some sections were using a thematic approach to the subject matter, and that the questionnaire had been designed by the Department as part of the project. (Complete oral and written instructions are shown in Appendices E, F, and G.) The same basic instructions were given for the posttest, on the day of the final examination.

The project assistant observed and tape recorded all class sessions of the two experimental classes and, in order to create as similar as possible an experience for the three control classes, observed and tape recorded several class sessions of each of these as well. (She is referred to in this report as both project assistant and observer.) Because she was present at least part of the time in every section of English 2, it was possible to introduce her to each class as a "teaching assistant in the English Department who is helping out by observing and tape recording in all sections of English 2." This explanation seemed to satisfy most students; if any of them questioned the observer or the instructor (project director) further, the explanation was a variation on that theme; we emphasized that different instructors were using different approaches to the literature (thematic and generic).

The instructor of the intergenerational class waited until the third class meeting to discuss the difference in class composition; she simply said that everyone must obviously have noticed that this class was a little different, and that the older students in the class were people from the community taking the course for credit and completing all the same reading and writing assignments as the regular freshmen. (During the semester a few students expressed to the instructor and observer some curiosity about the reason Lehigh was including older people in this class. Our response was that the University was interested in seeing what happens in such a situation. We would then change the subject.)

Students completed the posttest on the day of the final examination. When they turned in their posttest questionnaires, each one was handed a memorandum from the project director(instructor of the two experimental sections), explaining that all five sections of English 2 had participated in an experiment in which their attitudes toward aging, older and younger people as groups, intergenerational classes, and their own capacity for learning were being studied. The memorandum expressed thanks for their help and an offer to send each of them a copy of the abstract of the final report of this project. (A copy of the memorandum is attached as Appendix H.) Students in the two experimental sections also received a request for permission to use portions of their final essays as illustrations in any publications that might emerge from this project.

Student Opinion Questionnaire

(a) Purpose

The Student Opinion Questionnaire was designed to measure changes in students' attitudes on five separate scales (items are randomly mixed in the actual questionnaire without regard for the scales from which they come):

Scale 1 -- Younger Students' Attitude toward Their Own Aging

Scale 2 -- Younger Students' Attitude Toward Older People as a Group

Scale 3 -- Younger and Older Students' Attitude Toward Intergenerational Classes

Scale 4 -- Older Students' Attitude Toward Younger People as a Group

Scale 5 -- Older Students' Attitude Toward Their Own Success in a College Class

(b) Design

The Student Opinion Questionnaire uses a modified version of the format of the Kogan O. P. Scale, giving respondents a choice among four responses: "Agree," "Mildly Agree," "Mildly Disagree," and "Disagree." Kogan's series of six choices of varying degrees of agreement and disagreement was rejected because such a choice might cause students to ponder their answers. We preferred a spontaneous, initial response. We rejected a simple "Agree"-"Disagree" format because the straightforward, unambiguous nature of the questionnaire items might cause students to feel uncomfortable giving an unqualified "Agree" response to an item that reveals a negative (hence, socially unacceptable) attitude. "Mildly" gives them an "out." Another reason for providing four choices was that we could more specifically ascertain the students' movement toward slightly more positive or negative attitudes in each scale than we could if the questionnaire offered only "Agree" and "Disagree" as choices.

Two versions of the questionnaire were composed: Questionnaire x, for older students, and Questionnaire y, for younger students. Both are shown in Appendices E and F, respectively. All five scales are contained in each version, and the items are placed in the same random order in each version. The wording of items is exactly the same in both versions except for those items in Scale 1 which have to be worded differently for different age groups in order to make sense. Items 39, 53, 57, and 62 (of Scale 5) had to be worded differently in the pretest and posttest in order to make sense in the contexts of expectation and review of students' experience during the semester.

Items 7, 16, 18, 35, 47, and 67, all of Scale 2, (Attitude Toward Older People as a Group) have been borrowed from the Kogan O. P. Scale. To measure attitude toward younger people as a group, these same items are used in Scale 4, with "younger people" substituted for "older people." All other parts of the questionnaire have been composed especially for this experiment.

(One item not intended for analysis was added to the posttest of Questionnaire x: item 68, which reads, "I would like to take another college course after this one.")

(c) Pilot and Analysis

Both versions of the questionnaire were piloted as follows: Questionnaire x with two groups of people sixty years of age and older (12 students in a "Late Start" program at the Northampton County Area Community College, and 40 members of the St. John's Lutheran Church Senior Center, Whitehall, PA), Questionnaire y with 70 sophomores and 59 juniors at Lehigh University, all members of the "subject pool" administered by the Department of Psychology (See Methodology, Ethics). First-semester sophomores were chosen as a group because of all available subjects they are closest in age and level of college education to second-semester freshmen. The questionnaire was also administered to the juniors so that a larger total number of subjects could be included in the pilot.

It was difficult to assess the degree of similarity of the two older groups of pilot subjects to the ten older persons who would later be enrolled in the course. Because of the small number of older pilot subjects and their apparently lower level of verbal skill than the older students in the intergenerational class, we began with very little confidence in the pilot of Questionnaire x.

Two programs were written to analyze the responses to the scales. The first program assessed the reliability of each scale by computing Cronbach's alpha, a measure of internal consistency, for each scale; it also performed an item analysis by computing the correlation coefficient of each item with its scale. The second program assessed the dependence among the scales by finding the correlation between every pair of scales.

(d) Results of Analysis of the Pilot Data

Questionnaire y was filled out by 129 students. With this sample size, a correlation of .22 is significant at the .001 level. Accordingly, we adopted the quite conservative strategy of excluding any item whose correlation with its corresponding scale was below .30 and any item whose correlation was below .40 and whose mean was close to an end point of the scale.

We eliminated 16 items from the original Questionnaire y, and rewrote three items. Two items, 54 and 62, were retained even though they did not meet the standards (both are from Scale 1) because we were particularly interested in how they would be answered. We also added two items (22 and 61) concerning sexuality to Scale 1, items which of course could not be analyzed because they were added after the pilot test.

The correlations among the five scales, after the removal of appropriate items, are shown in Table 1. These correlations are sufficiently low to assure us that each of the scales is measuring a different dimension of attitude. The Cronbach alphas for these five scales were .88 (Scale 1), .58 (Scale 2), .79 (Scale 3), .47 (Scale 4), and .61 (Scale 5). Thus the five scales have adequate internal consistency.

TABLE 1

Correlations among the five scales of Student Opinion Questionnaire y after items with low correlations were removed

Scale	Scale 1	2	3	4	5
1		.44	.23	.24	.13
2			.20	.34	.25
3				.08	.16
4					.25
5					

Because the quality of pilot results on Questionnaire x were so poor (incompletely filled out), we were not able to complete a similar analysis. We simply eliminated the same items, included revised items 54 and 62, and added the newly written items on sexuality (22 and 61), so that the younger and older students' versions would include the same items.

The final Student Opinion Questionnaire contains five scales, Scale 1 having the largest number of items (34) and the highest level of internal consistency. Scale 1, Younger Students' Attitude Toward Their Own Aging, contains items worded in three different ways: "When I am over 60 years of age, I will . . ."; "The older I grow, the more . . ."; and "When [such-and-such occurs], I will feel . . . ." Two items were worded differently: "I would not change the rate at which time passes, even if I could," and "If I could control time, I would slow it down." We felt that Scale 1 was our strongest scale.

(e) Limitations

The small number of items in Scales 2, 3, 4, and 5 serves as a caution against generalizing from the results. That we could not analyze the pilot of Questionnaire x raises questions about its reliability for measuring the attitudes of older students.

(f) Administration

The pretest and posttest were administered on the first day of classes and on the day of the final examination. The advisory group member

who served as test administrator also served as independent observer in the two experimental classes; she was known to these students only as an occasional observer and was unknown to students in the three control group classes. Because of scheduling problems, the five classes did not take their final exam in the same location. The advisory group member administered the posttest to the two experimental classes and one of the control group classes in one lecture hall while the project assistant administered it to the other two control group classes in another hall. (The control students knew the project assistant only as an occasional observer.)

Observation Coding System

(a) Purpose

The observation coding system was designed to measure total amounts of specific kinds of group behavior in the two experimental sections of English 2 so that we could determine:

1. Whether the amount and nature of class activity (participation, whispering, eye contact, and laughter) would be different in the two groups;

2. Whether the older students in the intergenerational class would "take over," that is, participate so much in class discussions that they would prevent the younger students from participating at as high a rate as their counterparts in the all-freshman experimental group.

(b) Design

The observation coding system consists of a chart for each of the two experimental groups, with a checklist of behaviors along the left-hand margin and a row of symbols indicating what category of person is engaging in these behaviors along the top. The chart for the intergenerational group is more complex than the one for the all-freshman group because in the former we were concerned not only with student-to-student and student-to-class behaviors but also with intergenerational exchanges.

Figure 1 shows the actual coding charts for the intergenerational and all-freshman classes. These charts are simplified versions of the original charts we designed, which had included several other kinds of activity which we found, after some practice with the instrument, not practically codeable. We had expected, for example, to be able to code before- and after-class contact. But it was difficult to determine exactly when a five-minute before-class or after-class time frame would begin or end; furthermore, by midsemester students had become so used to the presence of the regular observer that they often engaged her in conversation before and after class and made coding impossible. We had also expected to be able to code such things as negative eye contact, comments indicating negative self image, and references to students' own future (aging). Because three basic activities (participation, whispering,

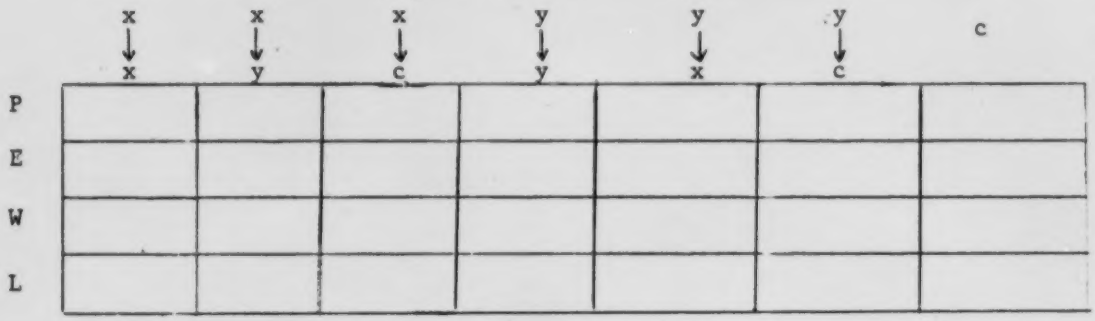
and laughter) occurred so frequently, it was simply impossible to code accurately and at the same time make judgments on the quality of eye contact and comments. As a result, the "extras" were abandoned in favor of correct coding of the activities with which we were most concerned.

A simple slash mark (/) was used to indicate an instance of activity in any of the four categories--P (participation), E (eye contact), W (whispering), or L (laughter). The observer assigned a hierarchy to whispering and eye contact, coding with a slash in row "W" if just whispering or a combination of whispering and eye contact occurred. If eye contact without whispering occurred between two students, she coded a slash in row "E." (If one person looked at another but the second did not respond, she did not code.) She coded a slash in row "L" whenever an individual or a group (class) laughed out loud.

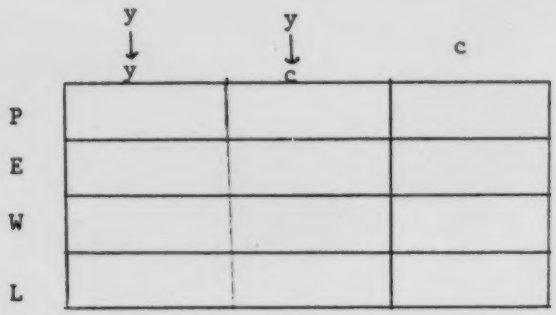
FIGURE 1

Coding charts for intergenerational and all-freshman classes

(A) Intergenerational Class



(B) All-freshmen Class



P = Participation (talking aloud)

E = Eye Contact

W = Whispering

L = Laughter

x = Older student

y = Younger student

c = class

↓ = to

In order to differentiate among three types of participation (talking aloud) in row "P," the observer used the slash mark (/) and two other symbols. An upside-down "T" (⊥) was used to code what we call "direct interaction," that is, any instance in which the coder could tell by the content of the speech and by eye contact that one person meant to speak directly to another. Even if the speaker's eyes wandered after the initial contact, it was assumed that the exclusiveness created at the beginning of the contact indicated one direct interaction until the speaker stopped talking. If the speaker was interrupted and then began speaking again, a new symbol, whichever was appropriate, was used.

An elongated s ($\int$) was used to code "adding to discussion," that is, any instance in which a student added to what another student said in the course of a discussion, as opposed to simply answering the instructor's question. A direct response to a question from the instructor was coded with a slash (/) under column x→c or y→c. If the next student called on to speak added to or disagreed with what the first student had said, even though he may have looked at the teacher while responding, his response was coded with "$\int$" in column x→x, x→y, y→y, or y→x. The coder continued using this "adding to" symbol ($\int$) for participation until the topic was changed by the instructor or by a student. If the instructor intervened by saying, "What other comments do you have?" or a variation thereof, and if a student responded with a comment not connected to the original discussion, a simple slash mark was coded in category x→c or y→c.

(c) Pilot

The project assistant (regular observer), the project director, and the advisory group member who served as independent observer practiced using the original coding system, gradually refining it as they discovered flaws, during the six weeks before classes began. It was used in several senior high school English classes and college sociology classes in which a variety of discussion formats were used. The purposes for this initial practice were to accustom both observers to using the system and to learn its limitations. In addition, the observers were able to begin testing for inter-observer reliability (see below).

(d) Administration

The project assistant (also referred to here as "observer" or "regular observer") observed and coded class activity in every class session of the two experimental sections of English 2, using the charts shown in Figure 1. She used naturalistic observation techniques, remaining as unobtrusive as possible while maintaining a friendly demeanor compatible with the informal nature of the classes. She sat near the front of the classroom with a view of the students' faces, alternating from one side of the classroom to the other from time to time. She did not code during those times when the instructor divided the class into small groups for instructional purposes; since several students spoke at once during these sessions, it was impossible to code them accurately.

Because the instructor taught exactly the same course, using the same teaching methods and nearly always the same amounts of time for various

instructional formats (large group discussion, "revolving chair," small group discussion, lecture, inclass writing, and individual student presentations), it was possible for the observer to code class activity in comparable 15-minute time segments for both classes. She normally filled in five charts for each 75-minute class session.

(e) Inter-Observer Reliability Test

In order to check for inter-observer reliability, the regular observer and independent observer tallied activities of five sessions of each of the two experimental groups. The correlations between the two observers' tallies for each behavior category in the intergenerational class ranged from r (23) = .87 to r (23)= .99. Correlations between their tallies in the all-freshman class ranged from r (23) = .92 to r (23) = .99. This is extremely high reliability.

Comparison of Younger Students' Performance on Written Essays

(a) Purpose

A comparison of essays written by the 18- and 19-year-old freshmen in the two experimental sections was intended to determine whether the final essays written by younger students in the intergenerational class would show more or less improvement over the first essays than would those of their counterparts in the all-freshman class from the beginning to the end of the semester.

(b) Design

The design was straightforward: we asked a panel of three independent graders to assign grades to the first and last essays written by freshmen in the two experimental sections. The averages of the grades assigned to the first and last essays in each class were compared, first to determine whether or not there was an improvement in grades in each class, and then to determine whether or not there was a significant difference between the degrees of change in the two classes.

(c) Procedure

Essays were graded by a panel of three graders who were not otherwise connected with the project. The official grades assigned by the instructor to the students' papers were unknown to these graders; theirs, likewise, were unknown to her. Panel members were selected from the teaching staff of Lehigh University's Department of English for their experience and interest in evaluating freshman-level expository writing. Of the three, one had recently been director of freshman English for the Department, another was currently serving on the freshman English committee, and the third had, before retirement, been director of freshman English and had had many years' experience as a grader of Educational Testing Service writing samples.

The three graders were asked to read 33 essays at the beginning of the semester and 33, from the same students, at the end of the semester. We did not have a complete sampling from the intergenerational class because two freshmen turned in their papers late. The sampling therefore included twelve (12) papers from the freshmen in the intergenerational class and twenty-one (21) from freshmen in the all-freshmen class. The two sets of essays, written in response to the first and last typed assignments made by the instructor, were collected, randomly numbered, and photocopied before the instructor had written any comments or grades on them. This procedure was followed on two separate occasions: at the beginning of the semester when the first essays were completed, and at the end of the semester when students turned in their last essays. The copies, without any indication of the identity of the writers or the section in which the writers were enrolled, were distributed to each of the three graders with the following instructions: to read the work of literature about which the students had been asked to write, to read the instructor's typed assignment, to read the 33 essays, and to assign letter grades without writing directly on the essays themselves.

After the independent graders had assigned grades to all essays (first and last), the letter grades were converted to numerical grades according to the University grading system (A = 4.0, A- = 3.7, C+ = 2.3, C = 2.0, etc.) Table 2 shows the mean grade given to each essay.

TABLE 2

Means of grades assigned by independent graders to first and last essays written by freshman students in two experimental classes

A. All-freshman Class

	Student Numbers	Mean grades	Student Numbers	Mean grades	Student Numbers	Mean grades
1st Essay		2.90		1.10		1.57
2nd Essay	1	3.57	8	1.43	15	2.23
		1.57		1.80		1.43
	2	2.90	9	2.90	16	3.00
		2.10		3.34		2.20
	3	1.43	10	2.33	17	3.33
		0.90		1.37		1.77
	4	1.90	11	1.10	18	2.00
		1.67		1.47		2.00
	5	1.20	12	2.00	19	2.23
		2.33		0.57		1.77
	6	3.23	13	1.47	20	2.43
		1.00		2.23		2.57
	7	2.80	14	2.10	21	2.67

B. Intergenerational Class

	Student Numbers	Mean grades	Student Numbers	Mean grades
1st Essay		2.33		0.90
2nd Essay	1	2.77	7	1.23
		3.67		0.00
	2	2.57	8	2.57
		1.33		1.57
	3	1.00	9	2.33
		1.43		2.23
	4	1.57	10	3.57
		1.67		1.43
	5	2.67	11	2.10
		1.00		2.00
	6	2.10	12	3.10

NOTE: Random student numbers have been converted to numbers 1, 2, 3 . . . for each section for simpler reference.

RESULTS

Analysis of Student Opinion Questionnaire

Analyses of responses to the five scales of the Student Opinion Questionnaire were intended to answer the first eight questions listed in the INTRODUCTION, Purpose section of this report. Each question is posed again here with a discussion of the questionnaire scale that was written to answer it.

The questionnaire is composed of five scales:

Scale 1 -- Younger Students' Attitude Toward Their Own Aging

Scale 2 -- Younger Students' Attitude Toward Older People as a Group

Scale 3 -- Students' Attitude Toward Intergenerational Classes

Scale 4 -- Older Students' Attitude Toward Younger People as a Group

Scale 5 -- Older Students' Attitude Toward Their Own Success in a College Class

Unless otherwise stated, all statistical tests were at the .05 level of significance. On the following pages the mean scores of the pretest and posttest and the statistical analysis for each scale are presented. The questions that are pertinent to each scale, first answered statistically, are further explored by analysis of individual test items.

Note that in all subsequent discussion of students' responses to items in the questionnaire, the terms "positive response" and "negative response" are used as follows: negative response indicates a negative attitude toward the subject dealt with by the scale or item under discussion, regardless of the wording of items. In order for a student's response to an item to be called negative, the student must have answered "Agree" or "Mildly Agree" to an item that states a negative attitude, or the reverse, "Disagree" or "Mildly Disagree" to an item that states a positive attitude to the subject of the item. "Positive response" indicates a positive attitude toward the subject dealt with.

To ascertain that all freshmen in the five classes were of the same population, we ran separate analyses of variance on the responses on the pretest for each scale that pertains to younger students. Recorded in Table 3 are the mean scores for the two experimental and three control classes on those three scales. Each analysis of variance failed to reach significance at the .05 level. We concluded that the younger students in all five sections could be considered of the same population in terms of attitudes on the three scales.

We retained scores for only those students who took both the pretest and posttest. For the final analysis we were dealing with 90 freshman students: 21 in the all-freshman experimental group, 19, 19 and 17 in the control groups, and the 14 freshmen in the intergenerational class.

TABLE 3

Mean scores of freshmen on three scales in pretest of Student Opinion Questionnaire

Group	n	Mean Score
Scale 1: Younger Students' Attitude Toward Their Own Aging		
Intergenerational Class (freshmen only)	14	126.79
All-Freshman Class	21	123.67
Control Class 1	19	122.84
Control Class 2	19	120.37
Control Class 3	17	124.53
NOTE: Maximum score = 170		
Scale 2: Younger Students' Attitude Toward Older People as a Group		
Intergenerational Class (freshmen only)	14	28.50
All-Freshman Class	21	28.05
Control Class 1	19	27.47
Control Class 2	19	30.21
Control Class 3	17	28.41
NOTE: Maximum score = 40		
Scale 3: Students' Attitude Toward Intergenerational Classes		
Intergenerational Class (freshmen only)	14	30.93
All-Freshman Class	21	31.71
Control Class 1	19	29.68
Control Class 2	19	31.53
Control Class 3	17	28.76
NOTE: Maximum score = 45		

The control classes were taught by three female faculty members. Having failed to find any differences among the freshman groups in all three scales of the pretest, we were able to test for teacher effect in the control classes on the posttest by performing a two-way analysis of variance. Table 4 lists the pretest and posttest mean scores of the control classes on three scales; a two-way analysis of variance shows no significant change in any control group and thus no significant differences among classes due to teacher effect.

TABLE 4

Pretest and posttest mean scores of freshmen in control classes on three scales of Student Opinion Questionnaire

Group	n	Pretest	Posttest
Scale 1: Younger Students' Attitude Toward Their Own Aging			
Control Class 1	19	122.84	121.95
Control Class 2	19	120.37	123.26
Control Class 3	17	124.53	123.82
Scale 2: Younger Students' Attitude Toward Older People as a Group			
Control Class 1	19	27.47	30.31
Control Class 2	19	30.21	30.89
Control Class 3	17	28.41	27.41
Scale 3: Students' Attitude Toward Intergenerational Classes			
Control Class 1	19	29.68	32.21
Control Class 2	19	31.53	32.36
Control Class 3	17	28.76	29.82

In the following pages, the results for each scale of the Student Opinion Questionnaire are discussed. In each case the scale is named, the questions meant to be answered by the scale are listed, and mean scores from the pretest and posttest are shown and discussed. In addition, we have given some attention to results on individual questionnaire items, shown in a separate table for each scale.

Scale 1 -- Younger Students' Attitude Toward Their Own Aging

1. Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

2. Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

TABLE 5

Mean scores on pretest and posttest of
Student Opinion Questionnaire

Scale 1: Younger Students' Attitude Toward Their Own Aging

Group	n	Pretest	Posttest
Intergenerational Class (freshmen only)	14	126.79	133.50*
All-Freshman Class	21	123.67	124.50
Control Group	55	122.58	123.01

* $p < .05$

NOTE: Negative attitude scores = 0 to 85

Positive attitude scores =86 to 170

With the analysis of variance and planned comparisons we asked the question, "Is the change in either of the two treatment groups different from the change in the control group?" Table 5 shows that the freshmen in the intergenerational class, in which the theme of the life cycle was used as an approach to literature, showed significant change in the positive direction in attitude toward their own aging, Scale 1. The all-freshman class, in which the theme of the life cycle was also used as an approach to literature but without the superimposition of the older students' presence, showed no attitude change, nor did change occur in the control group. Although aging and older characters were read about and discussed in both experimental classes, factual information about aging, the "cognitive component" in otherwise similar studies, was not part of the course. The "affective component" (Triandis, 1971), however, bringing older people into the classroom as students, appears to have led to attitude change.

In Table 6 the individual test items from Scale 1 are listed beside the percentages of negative responses by the freshmen in the intergenerational class on both pretest and posttest. (Note that no matter how the test item itself is worded, all "agree and "disagree" responses have been translated into positive or negative attitude toward aging.) The responses were so predominantly positive on all scales that presenting the percentages of negative responses on the table more clearly identifies those items that warrant investigation.

The items most interesting to us were the following, in which the score went from negative to positive or moved from positive to more positive by at least 25%:

(1) When I am over 60 years of age, I will be very happy to be my age.

(14) When I am over 60 years of age, people will admire me.

(42) When I am over 60 years of age, I will wish I were younger.

(50) When I am over 60 years of age, I will feel out of shape.

During the personal interviews many students said that the atmosphere in this course was different from that in other Lehigh courses because the older students were "so much fun," seemed more free to express themselves honestly, and were more open and friendly than most younger students. The movement toward the positive range on the posttest on items 1 and 42 seems to illustrate some new insight into the benefits of maturity. The change on item 14 hints that admiration of the older students was greater at the end of the course than at the beginning, or at least that the respondents had come to feel that they themselves would be admirable as they grew older. The enlightened response to item 50 is probably attributable to the freshmen's being impressed with the energy of the older students. (In sessions with the instructor at the beginning of the semester, two of the freshmen expressed the fear that the older students would write superior themes, having so much spare time. It soon became well known, however, that several older students were writing their themes at 3:00 in the morning, just like

their freshman counterparts, because their busy lives kept them from doing their assignments at other times.)

A 50% or more negative response appeared in only three items on the posttest. Items 21 "I would not change the rate at which time passes, even if I could," and 37, "If I could control time, I would slow it down," which deal with the inevitability of the passage of time, involve general philosophical issues that may not necessarily reflect a person's new-found ease with his or her own aging. Item 23, "The older I grow the more I expect to worry about death," remained at 50% from the pretest to posttest, possibly indicating that this group of freshmen had a perfectly even mix of optimists and pessimists.

TABLE 6

Percentages of younger students from intergenerational class exhibiting negative attitude toward their own aging on individual items from Scale 1.

Item	n = 14	Percentages of students who exhibit negative attitude	
		Pretest	Posttest
1.	When I am over 60 years of age, I will be very happy to be my age.	50.0%	21.0%
3.	When I retire, I will feel depressed.	28.6%	28.6%
4.	When I am over 60 years of age, I will look ugly.	21.4%	14.3%
8.	When I retire, I will feel that I have reached a happy time of life.	28.6%	21.4%
9.	The older I grow, the more I expect to lose my health.	50.0%	35.7%
11.	When I am over 60 years of age, I will be busy with activities I like	0.0%	7.1%
14.	When I am over 60 years of age, people will admire me.	42.9%	14.3%
17.	When I am over 60 years of age, my mind will be as sharp as ever.	35.7%	21.4%
20.	When I am over 60 years of age, I will feel depressed.	0.0%	14.3%
21.	I would not change the rate at which time passes, even if I could.	64.3%	57.1%
22.	When I am over 60 years of age, sex will be a pleasure.	7.1%	14.3%
23.	The older I grow, the more I expect to worry about death.	50.0%	50.0%
24.	When I am over 60 years of age, I will be popular.	14.3%	7.1%
26.	The older I grow, the more I enjoy life.	21.4%	14.3%
27.	When I finished high school, I felt frightened.	35.7%	35.7%

TABLE 6 continued

29. When my first child finishes high school, I will begin to worry about my age.	14.3%	7.1%
33. When I am over 60 years of age, I will be bored.	7.1%	0.0%
37. If I could control time, I would slow it down.	64.3%	50.0%
38. When I am over 60 years of age, I will depend on others quite a bit.	7.1%	7.1%
40. When I am over 60 years of age, I will have a healthy outlook on life.	0.0%	0.0%
41. When I become a grandparent, I will feel elated.	28.6%	14.3%
42. When I am over 60 years of age, I will wish I were younger.	71.4%	28.6%
44. The older I grow, the more conformist I become.	28.6%	14.3%
46. The older I grow, the more I expect to decline.	28.6%	21.4%
49. When I am over 60 years of age, people will feel sorry for me.	21.4%	0.0%
50. When I am over 60 years of age, I will feel out of shape.	50.0%	28.6%
51. The older I grow, the more individual I become.	21.4%	14.3%
55. When I am over 60 years of age, I will feel vigorous.	21.4%	21.4%
56. When I am over 60 years of age, I will feel forgotten.	14.3%	7.1%
58. The older I grow, the more my opinions are respected by others.	28.6%	42.9%
60. When I become a grandparent, I will feel bad about being old.	0.0%	7.1%
61. When I am over 60 years of age, sex will not be very important to me.	7.1%	14.3%
65. When I am over 60 years of age, I will be very independent.	28.6%	7.1%
66. When I am over 60 years of age, I will look terrific.	28.6%	28.6%

NOTE: By computer analysis of the Student Opinion Questionnaire, responses to items have been coded and translated into positive and negative attitudes.

Scale 2 -- Younger Students' Attitude Toward Older People as a Group

1. Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to literature?

2. Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to literature?

TABLE 7

Mean scores on pretest and posttest of

Student Opinion Questionnaire

Scale 2: Younger Students' Attitude Toward Older People as a Group

Group	n	Pretest	Posttest
Intergenerational Class (freshmen only)	14	28.50	31.07
All-freshman Class	21	28.05	29.52
Control group	55	28.70	29.54

NOTE: Negative attitude score = 0 to 20

Positive attitude score = 21 to 40

Table 7 shows the response to Scale 2, Younger Students' Attitude Toward Older People as a Group. With the analysis of variance we again asked the question, "Is the change in either of the two treatment groups different from the change in the control group?" Although the scores of the freshmen in the intergenerational class rose slightly more than the scores in the other groups, the change did not reach statistical significance.

We were surprised that the 14 freshmen from the intergenerational class, who spoke so positively in their personal interviews about their older classmates and whose attitude toward their own aging had moved in a positive direction according to the posttest, showed no significant change in their attitude toward older people as a group. That there was no change seemed to warrant a second look at the items in Scale 2, which was meant to

measure the negative stereotyping of older people by the young. Since the design of the overall study had provided for class observation at every session, tapes and diaries giving access to every detail, we were better able to analyze the response to this scale, which seemed to belie what we felt had been the mood of the students.

Table 8 shows the test items and the percentages of freshmen in the intergenerational class scoring on the negative side in the pretest and posttest. Again, regardless of the wording of the items, responses have been coded and translated into positive and negative attitudes. In every case, except for test item 16, the attitude stayed the same or improved; for some items (7, 12, and 67) the attitude improved dramatically.

Actually, the positive and negative changes in these four items clearly reflect what occurred in class. Response to item 12, for example, "Most older people make one feel ill at ease," which moved in the positive direction most dramatically, shows that 8 out of 14 younger students (57.1%) began the semester feeling ill at ease with older people. By the end of the semester 12 out of 14 felt comfortable. During personal interviews most younger students said that the older students had created what they felt was a very comfortable atmosphere in this class compared to that in other classes.

Item 7, "Most older people are very different from one another," and 67, "Most older people bore others by their insistence on talking about their own experiences," which reveal stereotyping when the response is negative, also showed solid movement in the positive direction. In personal interviews several students remarked that they were surprised at how interesting the older people were, as well as at how different they were from one another.

Only item 16, "Most older persons have their own ways and have a hard time changing," was overwhelmingly negative in the posttest. We found it interesting that the converse statement (item 47), which reads, "Most older people are capable of new adjustments when the situation demands it," was answered negatively on the posttest by only 28% of the younger students in this class. The negative movement in item 16 might be explained by something that happened in class. During the personal interviews nearly every younger student laughed about older students' having trouble following mechanical instructions, noticeably on one occasion at the end of the term when computerized teacher evaluations had to be filled in. It may not have occurred to the freshmen that while they had filled out identical forms at least 5 or 6 times, the older people had never seen this type of computerized questionnaire. The older students' behavior in this instance and on several occasions early in the semester, before they had learned classroom protocol, may have been translated into a negative response on this item.

TABLE 8

Percentages of younger students from intergenerational class exhibiting negative attitude toward older people as a group on individual test items from Scale 2

Item n = 14	Percentages of Students who exhibit negative attitude	
	Pretest	Posttest
7. Most older people are very different from one another.	35.7%	14.3%
12. Most older people make one feel ill at ease.	57.1%	14.3%
16. Most older people have their own ways and have a hard time changing.	64.3%	78.6%
18. In general, most older people are pretty much alike.	7.1%	7.1%
28. Most older people have nothing new to say.	21.4%	14.3%
35. Most older people are cheerful, agreeable, and good humored.	28.6%	28.6%
47. Most older people are capable of new adjustments when the situation demands it.	35.7%	28.6%
67. Most older people bore others by their insistence on talking about their own experiences.	21.4%	7.1%

NOTE: By computer analysis of the Student Opinion Questionnaire, responses to items have been coded and translated into positive and negative attitude.

Scale 3 -- Students' Attitude Toward Intergenerational Classes

1. Will the college freshmen's attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle has been used as an approach to composition and literature?

2. Will the older students' attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle has been used as an approach to composition and literature?

TABLE 9

Mean scores on pretest and posttest of Student Opinion Questionnaire

Scale 3 -- Students' Attitude Toward Intergenerational Classes

Group	n	Pretest	Posttest
Younger students			
Intergenerational class (freshmen only)	14	30.93	36.86 *
All-Freshman class	21	31.71	34.38
Control group	55	29.99	31.46
Older students			
Intergenerational class (older students only)	10	38.20	38.40

* $p < .01$

NOTE: Negative attitude scores = 0 to 27

Positive attitude scores = 28 to 45

The attitude toward classes with mixed student composition was examined by Scale 3. Once again an analysis of variance showed no significant change in either the control group or the all-freshman class, but the younger students in the intergenerational class showed significant change in the positive direction ($p < .01$). This outcome is shown in Table 9.

Scale 3 was also used to examine the attitude change of the older students in the intergenerational class. A t-Test determined that no change had occurred, but the outcome can be misleading without pointing out the possible range of score. Thirty-eight points places this group in a highly positive position in the pretest, not a surprising outcome since the older students had competed to be in this class and considered being selected an honor. A detailed examination of the individual items on the pretest and posttest, shown in Table 10, clearly shows how few negative responses there were both before and after to the idea of an intergenerational class. Test item 48, "Classes made up of only one generation of students are unnatural and limiting," was the only exception, receiving a negative response by 80% of the older students on the posttest. Inasmuch as the response to every other item was positive, we might conclude that this item as it stands is a poor indicator of attitude toward mixed classes: the term "unnatural" may simply be too strong a word. In subsequent use of this scale we might suggest changing this item to read, "Classes made up of only one generation are limiting," even though, surprisingly enough, as many as 43% of the younger students agreed with the statement as it was on the posttest, after disagreeing by nearly 86% on the pretest.

Responses to two other questionnaire items (52 and 54) indicate the success of this intergenerational venture for the younger students. In the pretest, nearly 43% believed that "The most stimulating classroom discussions occur among people of about the same age," and over 71% were certain that "Younger people and older people would find it hard to open up in front of each other in the classroom." By the semester's end, only one younger student in the intergenerational class responded negatively to each of these items. (None of the older students responded negatively to these two items in the posttest.)

TABLE 10

Percentages of younger and older students from intergenerational class exhibiting negative attitude toward intergenerational classes on individual test items from Scale 3

Item	Percentages of students who exhibit negative attitudes			
	Younger (n = 14)		Older (n = 10)	
	Pretest	Posttest	Pretest	Posttest
2. College classes are better when they're made up of people of mixed ages.	28.6%	21.4%	10%	0%
6. The most stimulating classroom discussions occur among people of different ages.	28.6%	14.3%	0%	10%
10. In a college classroom older people would probably not be able to keep up with the work.	7.1%	21.4%	0%	0%
10. Younger people and older people do not learn well together in the same classroom.	21.4%	7.1%	10%	0%
25. College classes should be made up only of people in my general age group.	14.3%	14.3%	0%	10%
48. Classes made up of only one generation of students are unnatural and limiting.	85.7%	57.1%	40%	80%
52. The most stimulating classroom discussions occur among people of about the same age.	42.9%	7.1%	30%	0%
54. Younger people and older people would find it hard to open up in front of each other in the classroom.	71.4%	7.1%	20%	0%
63. Younger people and older people should be taught in the same classroom.	28.6%	14.3%	10%	20%

NOTE: By computer analysis of the Student Opinion Questionnaire, responses to items have been coded and translated into positive and negative attitudes.

Scale 4 -- Older Students' Attitude Toward Younger People as a Group

Will the older students' attitude toward younger people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to literature?

TABLE 11

Mean scores on pretest and posttest of Student Opinion Questionnaire

Scale 4 -- Older Students' Attitude Toward Younger People as a Group

Group	n	Pretest	Posttest
Older students in intergenerational class	10	38.40	37.30

NOTE: Negative attitude scores = 0 to 22

Positive attitude scores = 23 to 45

The items in Scale 4 examine the effect of the intergenerational class experience on the attitude of the older students toward younger people as a group. A paired t-Test shows no significant change in their attitude, as shown in Table 11.

Just as on Scale 3 (attitude toward intergenerational classrooms), this group's score on Scale 4 was high at the start of the semester. Though to determine the reasons is not within the scope of this study, it is interesting that the older students' attitude toward younger people as a group was significantly more positive in the pretest than younger students' attitude toward young people as a group. Reasons can only be guessed: the older students' desire to be in this class reflects an already positive attitude toward young people; the effect of completing this questionnaire on the first day of class in the same room as their young classmates may have prompted a highly positive spirit; the older students, people with enough self-confidence to accept the challenge of a college course, had good self-images, possibly also indicating high regard for others.

A closer look at Scale 4 shows only item 45 strongly negative in the pretest. Actually, it would almost seem to be an older person's preroga-

tive to believe that "Younger people often don't know what is really important in life," especially for those who question their own wisdom when they look back on their youth. On the other hand, during the semester the older students openly admired the sensitivity and the keen perception of their young classmates. By the end of the semester 20% had moved from the negative to the positive side.

TABLE 12

Percentages of older students from intergenerational class exhibiting negative attitude toward younger people as a group on individual test items from Scale 4.

Item	n = 10	Percentages of students exhibiting negative attitudes	
		Pretest	Posttest
5.	It is difficult to trust most younger people.	0%	0%
15.	Most younger people have their own ways and have a hard time changing.	20%	30%
31.	Most younger people are very different from one another.	10%	20%
32.	Most younger people bore others by their insistence on talking about their own experiences.	20%	30%
36.	Younger people have nothing new to say.	10%	10%
43.	Most younger people make one feel ill at ease.	0%	10%
45.	Younger people often don't know what is really important in life.	60%	40%
59.	Most younger people are capable of new adjustments when the situation demands it.	0%	0%
64.	In general, most younger people are pretty much alike.	40%	30%

NOTE: By computer analysis of the Student Opinion Questionnaire, responses to items have been coded and translated into positive and negative attitudes.

Scale 5 -- Older Students' Attitude Toward Their Own Success in a College Class

Will the older students' attitude toward their own success in a college class be more positive after they have participated in an intergenerational class for one semester, in which the theme of the life cycle is used as an approach to literature?

TABLE 13

Mean scores on pretest and posttest of Student Opinion Questionnaire

Scale 5 -- Older Students' Attitude Toward Their Own Success in a College Class

Group	n	Pretest	Posttest
Older students in intergenerational class	10	30.40	28.90

NOTE: Negative attitude scores = 0 to 17

Positive attitude scores = 18 to 35

The older students' anticipation that they would do well in a college course was extremely high, despite the fact that none had any formal college education beyond an occasional isolated course. Greatest apprehension was exhibited by a 40% negative response to item 34, "I hesitate to talk during discussion."

A paired t-Test on Scale 5 shows no significant difference in the attitude of the older students toward their own success in a college class after having completed the course.

Had there been a noticeable change in this scale in the negative direction, the instructor and observer would have been alarmed, for all older students proved themselves unquestionably capable of finishing this course successfully. But an overall glance at the tallied items on the posttest indicates that 30% thought they fell short of the mark on four items. This pattern prompted a re-reading of the scale, disclosing a flaw in the posttest.

Scale 5 in the pretest examines the respondents' confidence in their potential for success in a college course; we can say that the items are

measuring an attitude about self-confidence. When the statements are rephrased for the posttest, however, two of the items in the scale actually ask the respondent to evaluate his or her own performance. For example, agreeing on the pretest that "The experiences I bring into class discussion will probably help bring out important points" (item 53) reveals optimistic anticipation and confidence, whereas agreeing that "The experiences I brought into class discussions probably helped bring out important points" indicates a judgment about the student's class performance. Posttest item 62, "I doubt if my own experiences helped to shed any light on what we studied this semester," is also inconsistent with the pretest in this way. In subsequent use of this scale, we suggest rephrasing item 53 to read, "The next time I take a course I will expect that the experiences I bring into class discussion will help bring out important points," so that it will explore the same attitude as the corresponding item in the pretest. We suggest item 62 be revised in a similar way.

TABLE 14

Percentages of older students from intergenerational class exhibiting negative attitude toward their own success in a college class on individual test items from Scale 5

Item	Pretest	Posttest
13. I feel I am a good contributor to discussions.	20%	30%
30. My best learning days were over some time ago.	0%	0%
34. I hesitate to talk during discussions.	40%	30%
39. (Pretest:) I think I will have trouble keeping up with the reading and writing in this class. (Posttest:) I had trouble keeping up with the reading and writing in this class.	20%	0%
53. (Pretest:) The experiences I bring into class discussions will probably help bring out important points. (Posttest:) The experiences I brought into class discussions this semester probably helped bring out important points.	0%	30%
57. (Pretest:) I expect to keep up just fine with reading and writing assignments. (Posttest:) I kept up just fine this semester with reading and writing assignments.	0%	10%
62. (Pretest:) I doubt if my own experiences will help to shed any light on what we are studying this semester. (Posttest:) I doubt if my own experiences helped to shed any light on what we studied this semester.	20%	30%

NOTE: By computer analysis of the Student Opinion Questionnaire, responses to items have been coded and translated into positive and negative attitudes.

Analysis of Observations

Analyses of the observations recorded with the observation coding system were intended to answer two basic questions:

1. Will the amount and nature of class activity (participation, whispering, eye contact, and laughter) be different in the two experimental groups (the intergenerational and all-freshman classes, both studying composition and literature with the life cycle as a central theme)?

2. In the intergenerational class, will the older students "take over"? That is, will they participate so much that they prevent the younger students from participating at as high a rate as their counterparts in the experimental all-freshman class?

In response to the first question, Table 15 (A) shows the means for the amounts of classroom activity per student per 75-minute class in the intergenerational and all-freshman classes, respectively. The rate of participation (talking aloud) per student per 75-minute class was significantly higher in the intergenerational class than in the all-freshman class, t (19) = 5.41, $p < .01$. The rate of whispering in the intergenerational class was significantly higher than in the all-freshman class, t (19) = 4.22, $p < .01$. The rate of laughter in the intergenerational class was significantly higher than in the all-freshman class, t (19) = 3.17, $p < .01$. Eye contact without whispering occurred so infrequently in both classes that we could not measure it.

In response to the second question, Table 15 (B) shows the mean amounts of participation per freshman per 75-minute class in both intergenerational and all-freshman classes. A paired t-Test reveals no significant difference between the two scores, t (19) = 1.55. We concluded that the greater activity of the older students had created the significant difference in participation between the two experimental groups, but that their activity had not prevented the younger students from participating at the same rate as their counterparts in the all-freshman class.

Throughout the semester the instructor and observer noticed that two activities, direct interaction among students during discussion and students' adding to what their classmates had said in discussion (coded "$\perp$" and "$\int$," respectively), seemed to account for longer periods of time during discussions in the intergenerational class than in the all-freshman class. Students in the mixed group seemed more eager to stay with a topic until it had been thoroughly investigated, while students in the all-freshman class seemed to need more prompting from the instructor. (The freshmen from the intergenerational class, in personal interviews at the end of the semester, suggested that the good class discussion was what made the atmosphere in this class different from that in other Lehigh classes they had had. Ten out of thirteen made this remark, unsolicited.) Table 15 (C)

compares the per day per freshman student combined direct interaction and adding to discussion in the two experimental groups. A paired t-Test shows no statistical difference between the two scores, t (19) = 0.96, even though the mean for the freshmen in the intergenerational class is slightly higher than for the all-freshman class, contrary to the figures of the means for total participation (P) shown in Table 15 (B). We can only conclude, again, that the greater activity of the older students did not prevent the younger students from engaging in these activities at as high a rate as the freshmen in the all-freshman class.

TABLE 15

Comparisons of class activity in two experimental classes

(A) Mean class activity in intergenerational and all-freshman classes

Group	n	Mean
Participation (P) per student per 75-minute class		
Intergenerational class	24	5.50
All-freshman class	21	4.00
Whispering (W) per student per 75-minute class		
Intergenerational class	24	1.80
All-freshman class	21	1.15
Laughter (L) per 75-minute class		
Intergenerational class	24	27.5
All-freshman class	21	17.5

(B) Mean total participation (P) per 75-minute class per freshman in intergenerational and all-freshman classes

Group	n	Mean
Freshmen in intergenerational class	14	3.35
All-freshman class	21	4.00

TABLE 15, continued

(C) Mean direct interaction (⊥) and adding to discussion (∫) (combined) per freshman per 75-minute class in intergenerational and all-freshman classes

Group	n	Mean
Freshmen in intergenerational class	14	1.60
All-freshman class	21	1.45

NOTE: Total participation (P) includes interactions coded with three symbols: /, ⊥, and ∫. See methodology section of report for explanation of symbols.

Initially, we believed we could also make a comparison of the increases over time in class activity in the two experimental sections. This was not possible, however. Shortly after the semester began, we saw that the amount and kind of activity was greatly dependent on the instructional mode for the day. That the intergenerational class was nearly always more active than the all-freshman was evident, but as the instructor varied the teaching routine, the participation and other interactions among students in both classes also varied. The revolving chair, for example, is a technique used for discussion in which the students call on one another. When this method was used, direct interaction was plentiful. During lecture or teacher-directed discussion, direct interaction hardly ever occurred. It was not likely, therefore, that the anticipated increase in class activity over time would actually occur. Whispering, which we had expected would increase during the semester, was less a function of how much at ease people had become with each other than a function of seating plans and class routine. While papers were passed out whispering between people sitting near each other occurred; during discussion students were attentive. Analysis of the data showed no significant increase in any kind of activity in either experimental group over the course of the semester.

Analysis of Younger Students' Performance on Written Essays

Analysis of younger students' performance on written essays was intended to determine whether the final essays of younger students in the intergenerational class would show more or less improvement over the first essays than those of the students in the all-freshman class.

In order to determine that the younger students in the two experimental groups could be considered of the same population in terms of their verbal aptitude, we compared their average SAT scores. The average SAT in the intergenerational class is 535; the average in the all-freshman class is 537. Without any statistical analysis, we concluded that, on the average, students in both classes had the same potential for improving their performance on written essays.

As shown on Table 2 (p. 31), we obtained the average grade on each of the two essays written by each student. We used t-Tests to analyze the resulting scores. The students in the all-freshman class improved, paired t (20) = 2.89, $p < .01$; the freshmen in the intergenerational class improved, paired t (11) = 2.33, $p < .05$; the rate of improvement did not differ between the two groups, t (31) = 0.50, $p > .10$. These figures are shown in table 16 below.

TABLE 16

Mean scores on first and last essays written by students in two experimental classes

Group	n	First essay	Second essay
Freshmen in intergenerational class	12	1.63	2.30 *
All-freshman class	21	1.79	2.30 **

* $p < .01$

** $p < .05$

The average increase in grade point in the all-freshman class was .51; the average increase for freshmen in the intergenerational class was .67. While the younger students in the mixed class improved slightly more than their counterparts in the all-freshman class, the difference was not significant, and we concluded that the presence of older students had no effect on the level of improvement exhibited by the freshmen in that group.

OLDER LEARNERS AND THE INTERGENERATIONAL CLASS: SOME OBSERVATIONS

Background

We need to reassess the way we perceive older learners. As Peterson (1978) states, "An outmoded but still prevalent stereotype holds that older people are incapable of learning or changing their behavior and that time so increases the inflexibility of individuals as to render educational undertakings useless." And so, most educational programs for older persons aim to keep them busy rather than to give them the kinds of challenges that invigorate younger people.

Peterson goes on to state that as those persons who are now in middle age reach retirement age, they may be expected to be more interested in education "than have their predecessors because their level of formal education will be substantially higher. This should provide a larger and more receptive clientele for liberal studies, second-career preparation, and education for coping with the problems that come with the later stages of life." Peterson believes that schools will begin to "allocate more of their resources toward this clientele group as legislatures and school boards learn to respect the potential voting power of the older citizens."

Parelius (1978) finds it troubling that "virtually no analysis of the potential impact of lifelong education has been made from the perspective of age stratification (constraining roles pertaining to age)." She argues that "to the extent that negative stereotypes shape the self-concepts of older persons in such a way as to restrict artificially their activities, a system of lifelong education should increase their self-confidence, motivation, and willingness to experiment with new roles." Thumin and Burnett (1963), responding to the need for information on the "motivations, abilities, and aptitudes" of persons over fifty years of age who pursue their education beyond traditional schooling years, studied "whether, and to what extent, old and young students differed in terms of the courses they selected, the number of units they carried, and the quality of their academic work." They report that, while many of the older students they studied were not enrolled in courses for credit, "14.6% of the 50-year-olds and 7.5% of those 60 or over had matriculated for the B.S. degree and the majority of these old matriculated students were certified school teachers who were working toward their degree in elementary or secondary education." They also found that "quality of performance, as measured by percentage of low grades, tended generally to improve with advancing age. . . ."

According to Peterson, older persons seek education for several reasons: "its usefulness in coping with changes in later life; . . . the vocational advantages associated with education; . . . and the need for education so that older people can continue to contribute to their society" (Peterson, 1978). McClusky (1973), in his co-chairman's statement on education at the 1971 White House Conference on Aging, stated that "education for older persons is based on the assumption that it will lead to something better in the lives of those participating. It also proceeds on the collateral

assumption that older persons are capable of a constructive response to educational stimulation." In the present study we proceeded on these two assumptions, and, as will be pointed out in later parts of this chapter, found them perfectly sound. We agree with Moody, who "object[s] to the notion of leisure-time education because it is ultimately demeaning; it seems to suggest that education in old age is not quite serious. The interesting fact is that, from the standpoint of the life cycle, older people have even less 'leisure time' than the rest of us: the sense of time is more constricted and choices must be made with this recognition of finitude in mind" (Moody, 1978). But, as Bader (1978) states, "our national experience to date has not for the most part included encouraging older people to compete with younger ones in the classroom, to attempt to pursue 'heavy' subjects 'even' in the company of other older people, or to attempt to complete the requirements for academically sound correspondence courses. . . ."

Assuming that older learners can succeed and make a contribution in the college classroom, why create special, watered-down "adult education" classes for them? In addition to the experimental questions discussed in previous chapters of this report, we were interested in observing several other elements: the relative success of the older students when they were placed as peers in the college class with "regular" college students, the kinds of contributions they would make to the class as a whole, and the kinds of problems that might arise in an intergenerational class.

McClusky (1978) cites a number of ways in which older and younger students in an intergenerational class can learn from each other. He claims that older persons can "recover some of the idealism they probably had in the earlier years. . . ." He feels they can renew "a sense of intellectual discovery" and "rekindle their interest in and achieve an extended sense of a viable future." They are also "more likely to maintain a meaningful contact with the stream of societal change" if they participate in intergenerational classes. McClusky believes that younger students benefit from older students' "expertise" and that they learn how learning itself can be translated into life experiences, or how theory can be translated into practice. They also learn to see the subject matter in a broader context and perspective than when they are in class with students of only their own age. McClusky feels that "the variety of intergenerational differences, [sic] can be the spice of the teaching-learning process." Perhaps the preponderance of favorable responses toward intergenerational classes as reported by Covey (1980) and as shown in posttest responses of younger students in the present study resulted from just these advantages.

Below are a number of observations on older learners and the intergenerational class based on a review of our diaries, transcriptions of class discussions, and interviews with students in the intergenerational class. While these observations fall outside the scope of the experimental design and are not supported by hard data, they are worh reporting.

The present study, although not intended to produce experimental data on specific advantages or disadvantages of intergenerational classes,

seems to bear out McClusky's contentions. The intergenerational freshman composition and literature course given at Lehigh University in the spring, 1981 was a positive educational experience for students of both age groups. We have summarized it here in several contexts: first, in responses to the numerous objections voiced by colleagues and other friends concerning problems older students might cause in the classroom; second, in a comparison of numbers of ideas raised in the two experimental classes in discussions of literature; third, in oral reports by younger students in personal interviews after the end of the semester; and fourth, in the reports of older students in similar interviews.

Responses to Common Objections

Over the past two years, while planning and carrying out this study, we have discussed the concept of intergenerational learning with many colleagues and other friends both on and off campus. The statements and questions shown below represent the concerns that have been raised most frequently in these discussions. Each statement or question is followed by a response based on our recent intergenerational classroom experience.

(a) "Older students will take over, talk too much about their own experiences, and either bore everyone or get the class off the subject."

This was perhaps the most commonly expressed concern among people with whom we discussed the project. In order to determine whether the older students in the intergenerational class did in fact "take over," we compared the per-student per-day participation rates of younger students in the two experimental classes and found that they did not differ statistically (see RESULTS, Analysis of Observations). Thus, experimental data support our observation that this much-feared phenomenon did not occur.

McClusky (1978) presents the older learner's experience as a unique opportunity for the teacher. He says, "to date, educators have not been very creative in finding ways to use the student's own life experience to enhance the learning process. . . . We have yet to discover ways of integrating the rich life experience of older people into the classroom, of tying the lessons of experience to the conceptual structure of subject matter, instead of sacrificing one to the other." The instructor in the present study found that, in a composition and literature course in which the life cycle was used as a central theme, the experiences of older students could be effectively used to help bring out the essence of a work of literature.

Rather than worrying about older students' experiences boring the class, the instructor was able to use their comments and anecdotes to help drive certain points home, open up discussion for students of both age groups, and bring some humor into the classroom. By the fourth class session, for example, several older students were expressing their ideas about the literature in terms of their own experiences, often saying that they had known "people like that" (characters in the literature). When

one older man said, concerning one character's expectations of the future, "Life doesn't operate that way," the instructor answered, "You can vouch for that." The class had a comfortable, friendly laugh about this, and the ice was broken concerning the simple fact that some of the students were older persons.

Excellent insights sometimes came from older students' comparisons between fictional situations and their own experiences, and younger students in the class quickly picked up the technique. In a discussion about Sherwood Anderson's story, "Departure" (from Winesburg, Ohio), the class discussed the lack of sentimentality in the author's portrayal of the departure scene. One older man, showing his appreciation for the difficulty small-town people often have in expressing emotion, said,

> "It's true to life. Man is always afraid to show his emotions. The drunk, the old lady, they're afraid to open up. I've lived long enough to see--we don't like to tell a man we love him."

Later in the same discussion, we talked about the thoughts of character George when he sits on the train just before the departure, and a younger student said, "It seems that even in my own experience when you are removed from something, you think about the little things you didn't think about before." This young man's use of "even in my own experience" seems to indicate that he was attempting to draw on his experience as a follow-up to the older man's comment. Both comments were helpful and led to the instructor's pointing out Anderson's uncanny ability to create a brief span of time in a character's life without overdrawn, sentimental verbiage, as well as his amazing ability to show the reader in a new light things he already knows.

Because the central theme of the course was the life cycle, the older students' comments on growing older were particularly useful in class discussion. When discussing William Carlos Williams's poem, "Asphodel, That Greeny Flower," the instructor asked whether or not this poem could have been written if Williams had expected to live forever. An older man answered,

> "When you are in your youth you have eons of time, but when you're up in years you know you have to get every moment out of the day because you don't know if you have tomorrow. You savor with a different taste bud."

Because the all-freshman class had brought up the question of Williams's promiscuity, one young student in that class particularly objecting to the poem on the basis of the poet's guilt, the instructor asked the students in the intergenerational class whether or not they would forgive Williams if they were in his wife's shoes. An older woman answered, "I think the longer you live the more tolerant you become, and I think it is much easier

the older you become. His wife could have forgiven him if she was as old as he was." Later, when a younger student said, "This is his second chance; he is never going to ask for a fifth or sixth chance," an older man said, "You're wrong," and the class laughed. The man responded, smiling, "That's the years talking." An insight about the increased ability of people to understand and forgive each other as they grow older could be shared at the same time that younger and older students acknowledged their age difference.

On several occasions older students disagreed with each other in their interpretations of a work of literature because of their different past experiences. The instructor encouraged debate because it heightened interest on the part of the whole class. But when two people disagreed on the basis of experience, the instructor also used the opportunity to point out the danger of biasing the reading of a work by interpreting everything only in terms of one's own thinking. Such occasions provided illustrations of the need to go back to the text to see just exactly what the author had written. For example, during a class session on Saul Bellow's novel, Seize the Day, some discussion revolved around the father-son relationship and the character Wilky's reflections on his father's mortality. In response to a question from a younger student, two of the older women made statements about their own anticipation of death: one felt strongly that when one grows older one wants to be prepared in every sense, and the other denied ever thinking about death. In order to make use of these comments while staying with the subject, the instructor asked the class to consider Bellow's portrayal of the character Dr. Adler: was he preparing for death? If so, how?

In a like situation, when discussing just how realistic was the use of obscene language in Jason Miller's play, That Championship Season, the older students were split in their opinions. Three felt strongly that people in their forties just "weren't like that," and three others spoke up in defense of the playwright's ability to portray a drinking scene as it really is. Most of the younger students seemed to feel the language was completely realistic. Had there not been such strong disagreement, the ensuing exploration of why Miller portrays the characters as foul-mouthed, overgrown boys would probably not have been as engrossing for any of the students in the class. As it was, the class shared a sense of mission: to justify this particular writer's use of language. (Since the young students in the all-freshman class had barely noticed that the language was rough, their discussion of Miller's use of language lacked the same intensity.)

Even in discussions of student writing, older students' personal experiences were helpful. During one class session, the instructor wished to show the usefulness of being able to determine the thesis, or main point, of what one wants to write. She asked for examples of situations outside English class in which one might need to arrive at a thesis statement. One older woman said that when she worked in advertising she had to have a thesis statement in mind whenever she wrote an ad. An older man said that in his real estate business (in which he is currently active) he has to use three separate thesis statements for three potential buyers of a large farm he is selling. The younger students also came up with good examples from

their own experience: one young man said that he would have to have a hypothesis which is converted into a thesis statement for his senior year engineering project; another said he had to come up with a thesis when he talked with his English teacher, trying to explain away the errors in his English essays.

On the few occasions when an older learner seemed about to take the class "off the subject," the instructor intervened as tactfully as possible, sometimes appealing to the class's sense of humor. For example, when we discussed James Agee's novel, A Death in the Family, and the film based on the novel, one of the older women simply could not contain her delight at seeing Robert Preston in the movie. She insisted on telling about his beautiful blue eyes and the time she had seen him in a musical, "I do, I do." The instructor laughed, let her tell the story, and then said that although the novel may not be as exciting as Robert Preston we had to return to it. The whole class chuckled, and no one was embarrassed.

Because most of the older students had not been in a formal classroom since high school, they were not used to raising their hands before speaking. The instructor, delighted by their enthusiasm but faced with the possibility of chaos, announced two or three times during the first two weeks of class that only those who raised their hands would be recognized as having the floor. After the first few sessions the older students became used to this convention. Older students learned, too, to recognize that the class benefited from hearing what everyone had to say. Several of them reported to the instructor that they did not want to "take over" and that they were purposefully letting others talk. On a few occasions, they even said in class that they would like to hear what certain quieter students (usually younger ones) had to say.

(b) "Older and younger students will have an awfully hard time opening up in front of each other."

This simply was not a problem. The younger students spent the first half of the opening class session in shock because they couldn't figure out why the older people were there, but from then on the atmosphere was extremely relaxed. One of the items on the Student Opinion Questionnaire addresses exactly this issue. As reported in RESULTS, Analysis of Student Opinion Questionnaire, 71.4% of the younger students in the intergenerational class agreed in the pretest that "Younger people and older people would find it hard to open up in front of each other in the classroom." At the end of the semester, only 7.1% agreed with this statement. The percentage of older students agreeing with this statement moved from 20% to 0% from pretest to posttest. The students' attitude change seems to reflect their having been able to open up quite easily in front of each other during the semester. The answers young students gave in personal interviews to the question, "Did you ever feel any awkwardness discussing the life cycle theme with older students, especially when we discussed old age or death?" also indicate that rather than feeling awkward they were impressed with their older classmates' positive attitude about aging and their openness in discussing it.

Moody (1978) advocates the use of dialogue in the classroom to help older students discover and rediscover knowledge. He says,

> The enormous value of education in old age lies in the way in which each subject studied can illuminate an aspect of [the older learner's] unrecovered self. . . . The study of . . . literature allows them to see, objectified, the same forces and conflicts that run through all our lives, to see that the story of the human race is one story.

In the discussion format, students were encouraged to express their own views of the literature but also to examine them critically. As Moody writes, the instructor should "urge the student to examine [his or her opinion], to justify it, perhaps to qualify it." In the present study, older and younger students also helped each other examine their opinions. As noted in (a) above, the older students openly disagreed with each other. They also showed no hesitation to express their positive and negative feelings toward the literature. And, by the seventh class session, a younger student spoke out in defense of the poet Williams, disagreeing with the older man sitting next to him, who had been criticizing the poet's apparent lack of form. Two other older students also expressed appreciation of the poem, making excellent points about the use of language and the changes in tone. After this class session, two older men who had at first reacted extremely negatively to the poem talked to the instructor. One said that he had unfortunately gotten into the habit of "not reading, but rereading," and that he was beginning to recognize the value of "getting into new things." The other, whose opinion had been challenged by his young neighbor, said that the discussion had "opened up" the poem for him.

As the semester progressed, the instructor and observer noticed that younger and older students were able to disagree with each other without animosity, and, in fact, often with humor. During the discussion on Jason Miller's That Championship Season, one young man introduced a healthy climate for discussion by saying he "strongly" disagreed with one older man's opinion about the use of bad language in the play. He backed up his comment by relating a personal experience of his own. Another young man then disagreed with the same older student, saying, "A point that ____ made, about not living in the past every day but only living in the past for this reunion, I disagree with that totally." A third younger student then added that the play "wouldn't be real at all if they didn't use strong language." The older student who had been challenged then asked for opinions of the women in the class and an older woman said, "I thought the vulgarity made it more realistic--they were immature people trying to go back to their past." On another occasion, when one of the older women made a strong comment on Blanche in Tennessee Williams's play, A Streetcar Named Desire, a younger student challenged her by asking, "What exactly do you mean by that?"

Open disagreement was also evident in a discussion of Walker Percy's novel, The Moviegoer, in which some students--young and old--felt

that the main character, Binx, was unable to love, and others,--young and old--disagreed strongly. Several students in both age groups were adamant about their interpretations, certainly not hesitating to express them just because of differences in age. In fact, one older woman, who took the position that Binx was a "sex maniac," received both amused and serious challenges from younger as well as older students. One young man in particular seemed bent on convincing her that Binx was "honest and open," a man capable of communion with others.

The older students' openness in expressing opinions was sometimes helpful, sometimes not. But ultimately it seemed to help the younger students to open up and talk more freely; on balance, the discussions were richer because of it. As Moody (1978) writes,

> Everyone, including old people, tends to be dogmatic when speaking from experience. On the other hand, we are all aware of the older person who becomes subservient to "the professor" by casting teachers in the role of people who know all the answers, all the facts. Let us admit as well that many faculty members are comfortable in this superior role.

Such a role is surely easier to play in a class of 18- and 19-year-old college freshmen than in a mixed class. When teaching this mixed group, the instructor's objective was to be on the alert for the kind of dogmatism Moody mentions but not to be afraid of it. When a student's opinion needed challenging, whether the student was young or old, the instructor challenged. And the students, in a format in which the exchange of ideas was encouraged, challenged each other.

The students' openness was also evident in the humor in this class, as shown in the difference in amounts of laughter in the intergenerational and all-freshman classes (see RESULTS, Analysis of Observations). Again, although the younger students were a good-natured group by themselves, the older students' ability to "speak their piece" without awkwardness seemed to loosen up the whole group. One man in particular almost always had something amusing to say about the literature. He commented that William Carlos Williams's typewriter must have gotten broken, and that one of the poets Williams mentions "was in jail all his life along with the criminals." While such comments may not meet with every professor's approval in terms of literary criticism, they did a great deal for this class because they made it "okay" not to "like" every work of literature. When the instructor asked why George Willard, in Anderson's "Departure," did not say goodbye to his girl friend Helen, this same student said, "He owed her money!" The entire class roared with laughter. Later, in the discussion of That Championship Season, when one of the older students said that the drinking scene was realistically portrayed, adding, "The restraints are gone and the polish is gone," a young woman in the class was able to retort, "I don't think they had much polish." Again the class laughed.

Younger and older students seemed more able to share their concern about the quality of their work and more able to laugh about

grades than usual in an all-freshman class. A trio of students who sat in the front row (one older man and two young men) often commiserated about their grades on essays, and when the older man received an "A" on a paper the other two positively beamed. When one of the young men talked about his poor grade, the older man said, "Now, don't always put yourself down." One older woman told the instructor that she had spoken with a couple of younger students after class and that they had told her that they had received low grades, just as she had. They had comforted and reassured each other that they could do better. When the instructor announced that several students needed to make appointments for consultation on their writing, one older woman called out, "That's me you're talking about," and the class chuckled.

In small group discussions a younger person sometimes was the only young student in a group with four older students, and vice versa. Such group make-up never seemed to stymie conversation. In fact, often a quiet student who seldom opened up in large class discussions would be found talking avidly to a small audience of persons of another age group. And alignments certainly did not break along age lines. For example, the observer once noticed a younger woman and an older woman eyeing each other in amusement over something a young man said in a small group discussion. Several friendships blossomed in the class between young and old, two of them between older women and the young men who sat beside them. The comfortable relationship young and old felt with each other might best be illustrated in an episode toward the end of the semester when a young man said about the grandmother in Katherine Anne Porter's "The Old Order": "She's a stubborn old lady. She doesn't give up." Everyone, especially the older man sitting beside him, laughed out loud.

(c) "The older students will slow things down."

In personal interviews at the end of the semester, seven younger students answered that the older students had not held the class back at all, five said that they had not held it back except once in a while when specific instructions were given, and only one said he thought they had held the class back. The instructor used exactly the same syllabus in the intergenerational class as in the all-freshman class, and both groups moved at the same pace throughout the semester. Not only did the older students keep up with the work, but several of them read extra material, borrowing library books by authors whose works they had read for class.

The older students were not familiar with certain things that the freshmen had come to know extremely well from having been enrolled in Lehigh's first semester freshman English course. For example, the concepts of "thesis," "theme," and "freewriting" were completely new to them, while most of the freshmen had spent the entire first semester writing thesis statements, freewriting, and learning to differentiate between "theme" and "thesis." Also, because they had not been in an English class of any kind for some forty years, most of the older students could not immediately talk about language in grammatical terms, such as whether sentences were in the "active" or "passive" voice. They did, however, learn and re-learn these and other terms and concepts within a few weeks. And, although the older students were readier than their young classmates to acknowledge that they were unsure of something, the instructor's probing revealed that a few of

the regular freshmen also had trouble with these concepts. All students who had problems were asked to visit the instructor for brief individual or small group sessions, and by about the fourth week the whole class was using the same vocabulary.

Standardized forms presented a slight problem, because the older students had never seen the kind of computerized forms on which they are expected to blacken tiny circles with a number two lead pencil. "Slight problem" is used deliberately here because only in one instance did the instructor have to explain a form in extremely simple terms and answer several questions from older students, a process that took approximately five extra minutes.

During the first few class sessions the older students did have a difficult time absorbing oral instructions the first time they were given. Even if they had been working, they had not been in a situation in which they had to "listen well the first time" for many years. Almost invariably, at least one of them would ask the instructor to repeat the instructions. The instructor made a point of saying to the entire class that she normally gave instructions only once and that they should always keep their notebooks open and pens in hand in case anything was said that they needed to remember for future reference. Several of the older students talked with the instructor after that particular class session, saying that they were "learning to pay attention." They did learn, and the problem disappeared soon afterward.

(d) "The older people will have physical problems. Won't that cause trouble?"

Physical problems did not get in the way of the learning process in this class. Only one of the ten older students was "out sick" for three class sessions, as was one of the young women in the class. On one very bad snow day, five older people were absent. Otherwise, attendance was nearly one hundred percent in both age groups.

All but three of the older students parked in the regular student parking lot and walked two blocks to class; the other three, whose heart conditions prohibited them from walking long distances in the cold winter months, were given permission to park in the faculty lot directly behind the classroom building. One older woman had a hearing problem so she sat where she could hear best and turned up her hearing aid. She was one of the most frequent and astute contributors to class discussion. Another woman had poor eyesight; she sat in the front row and used a magnifying glass to read small print whenever students were asked to read a passage during class. Somehow she always finished as quickly as everyone else. And finally, one woman (one of the three people with heart conditions) had some trouble getting in and out of her chair when the class was asked to move into special seating arrangements for small group work. The younger students were patient with her, and she took the situation in stride. The only student who ever dozed off in class was a young man.

(e) "Won't it be hard to contradict an older person in class?"

As discussed in (b) above, the instructor never hesitated to challenge students, no matter what age. When an older man criticized a sample essay because its focus was too narrow, the instructor answered that this apparent limitation was actually its major strength. The student was surprised, but he was also forced to think about the importance of narrowing the topic of an essay. An extremely bright and hard-working student, he began to apply the same principle to his own writing and managed to improve it considerably. Once, when an older woman began to ramble, the instructor explained that the class had only so much time to deal with certain issues. After class, the same woman commented to the observer that she was glad the older students were being treated the same as the younger. Various other older students made comments like hers to the observer and instructor throughout the semester; the older students seemed to take pride in their status as "regular" students not in need of pampering.

Moody (1978) cautions teachers of older learners to be aware that these students may be defensive because patterns of a lifetime are being challenged. He writes, "Every teacher of older people is familiar with the escape maneuvers, defense mechanisms, rigidities, and anxieties that [T. S.] Eliot summarizes in his phrase 'the knowledge that imposes a pattern and falsifies.'" He explains that defensiveness is a form of "self-preservation [which] can destroy the possibility for growth and adaptation in the present. As teachers . . . it is our role to facilitate the conversion of life experience from an obstacle, into a source of strength, through education."

The instructor in the present study noticed several instances of older students' defensiveness. Each case was understandable: normally an older student had learned a particular rule of grammar or composition by rote many years ago and had followed it all his or her life, unaware that in certain situations it may not apply. One man in particular seemed to feel a need always to arrive at the "right" interpretation of the literature; fortunately, his curiosity and ability to listen to what other students had to say saved him from rigidity. On the whole, the instructor found that the older students' ability to adjust to new patterns was remarkably good. Several instances have already been mentioned; others include several students' stating, at the end of the course, that their taste in literature had changed because they had opened their minds to more difficult, less "best-seller," reading matter, and two older men's saying that they now recognized the specific skills they needed to work on to become really good writers (both would like to write professionally).

(f) "How can you give an older person a low grade? Won't you be compromising the standards of the Department?"

The answer to the first question is, "With the same careful consideration shown when one gives a younger student a low grade." The answer to the second is, simply, "No." Nearly all the older students in the present study individually asked the instructor whether or not they were being graded by the same standards as the younger students. They were

always relieved to learn that they were.

Proof came early in the semester to two women who received "F" on their first written assignment. Both were disappointed, but after a half-hour session with the instructor they understood why their grades were so low. They had actually misunderstood the assignment because they had been so nervous about getting it right! Other older students also received low grades during the semester. But because all of them were capable of performing at least adequately, none received low final grades. The average was "B," the same as for the freshmen in both experimental classes; the highest grade was "A-" and the lowest was "C+". The instructor never compromised the grading system by awarding better grades because of sympathy for age. Such sentiments might constitute a problem for instructors who are afraid older persons will be devastated by low grades, but these teachers would do well to remember that older people have learned to live with disappointments and that, together with encouragement and constructive criticism, they usually appreciate honesty on the part of the instructor.

(g) "Won't the older students take up a disproportionate amount of the teacher's time?"

Again, no. The instructor in the present study spent the same amount of consultation time with older as with younger students. Older students needed more time in the first three weeks of the semester for several reasons: some felt insecure about being in class with "those smart young students"; some, like the two women mentioned in (f) above, had difficulty translating oral instructions into written assignments until they became used to taking directions in class; others needed to refresh their knowledge of terms and concepts. After these initial sessions, though, older students took no more time than their younger classmates.

Schools would be well-advised to hold periodical orientation programs dealing with back-to-school anxieties, classroom procedures, standard forms, and frequently-used terms, so that older learners can feel more secure during their first few weeks in class. (The orientation program given for the older students in this study did not, in the estimation of the instructor, adequately cover these concerns.)

(h) "Older people get too emotional and have a hard time looking at the material objectively."

Several older students displayed negative emotional responses to some of the literature, but no more than their counterparts in the all-freshman group. The strong emotional reactions of a few older students against certain characters in Percy's The Moviegoer and Miller's That Championship Season might be compared with those of younger students in the all-freshman group against the poet Williams in "Asphodel" and the character Blanche in A Streetcar Named Desire. In these cases students allowed their personal reactions to get in the way of objective consideration of the works, and the instructor had to counter with questions directed at a more critical view of the literature at hand.

The instructor usually felt, however, that the class was better off if some reaction was expressed than if students had no response at all. An emotional response to a character or situation enabled her to probe; productive discussion was the usual result. Older students' relative sense of freedom to express personal feelings created a more honest atmosphere than if all students had felt they had to take the instructor's view of everything presented.

Every teacher of freshman English dreads those moments when a sea of blank, silent faces leaves the instructor with no idea of whether or not his or her presentation has made an impression. In general, when students express their feelings, the instructor is in a better position to teach because he or she at least knows the starting point.

Discussions of Literature

Throughout the semester the instructor and observer noted that differences between the two experimental classes were apparent not only in the amount of class activity (tallies of participation, whispering, and laughter were significantly greater in the intergenerational class than in the all-freshman class), but also in the variety of ideas expressed about literature. The instructor prepared the same discussion topics and questions for both classes, but ideas and questions from students in the intergenerational class seemed more diverse than those in the homogeneous group. Sometimes a topic that stirred controversy in the mixed class was ignored in the all-freshman group; disagreements over interpretations seemed to be more prevalent in the intergenerational class. Certainly the all-freshman class responded very well to the instructor's probes when she wanted students to elaborate, but the spontaneity and openness in the intergenerational class appeared to help these students bring forth more of their own ideas in addition to those anticipated by the instructor.

By counting the numbers of ideas that emanated from discussions in in the intergenerational and all-freshman classes, we hoped to answer the following question about the study of literature in the two experimental groups:

> Did students in the intergenerational class bring out more ideas in their discussions about literature than did students in the all-freshman class, even though the instructional format and prepared questions were the same for each class?

Four corresponding discussions from both classes, transcribed from tape recordings, were chosen for analysis. All four were standard teacher-led discussions; for each discussion the typed transcriptions from both classes were of approximately the same length. (Class sessions on William Carlos Williams' "Asphodel" and Willa Cather's "Neighbour Rosicky" were not analyzed because the typed transcriptions from the intergenerational class were much longer than the corresponding transcriptions from the all-freshman class.)

In order to "count" ideas in any given discussion, we recorded in an appropriate category each comment that could be distinguished as a single, new idea. Some students' responses contained more than one idea and thus were categorized in more than one list. After the comments from both groups were categorized in this way, the ideas unique to one or the other group were noted and counted. Table 16, which shows the tally for the four matched discussions analyzed in this way, reveals that in three out of four corresponding sessions a greater variety of ideas was expressed in the intergenerational class than in the all-freshman class.

TABLE 17

Comparison of numbers of ideas expressed in class discussions on four works of literature in two experimental classes

Numbers of ideas expressed only by the intergenerational class	Numbers of same ideas expressed by both classes	Numbers of ideas expressed only by the all-freshman class
	That Championship Season, by Jason Miller	
48	20	34
	A Death in the Family, by James Agee	
53	21	29
	Seize the Day, by Saul Bellow	
30	19	22
	A Streetcar Named Desire, by Tennessee Williams	
21	35	30

Interviews with Younger Students

After all students had taken the final examination for English 2, the project assistant interviewed younger and older students from the intergenerational class. Because they had already completed the post-test of the Student Opinion Questionnaire and knew that they had taken part in a study, the interviewer was able to ask the younger students direct questions about their impressions of the intergenerational class, older students, and their participation in an experiment of this kind. The questions are listed here in the order in which we posed them to each student, followed by summaries of the responses. (Because one younger student had to go home early, he was not interviewed. The responses recorded here represent the opinions of thirteen younger students.)

(a) "How do you think the presence of the older students in this English class made the atmosphere different from that in most other Lehigh classes?"

Ten students said that this class generated more interesting discussions than any other class they had had. Five also described it as more enjoyable or more fun; other descriptions were "friendlier," "more open," and "more relaxing." A few students described the atmosphere in the intergenerational class by comparing it to other freshman classes. For example:

> "In a room full of all freshman no one wants to talk. They all sit and stare. But with the older people, they started the discussion and then it seemed we all got involved."

Some remarked that the older students took some getting used to:

> "At first I felt a little uncomfortable. I didn't know what to say and what not to say. Like your grandparents are right there! But then once I got used to it, it was like normal."

> "Once you got used to it, they seemed like regular students."

When asked if they found anything uncomfortable or negative about the atmosphere, all said no.

(b) "Do you think you learned anything from the older students?"

All but one said yes, some thinking they had learned a great deal and others just guessing that they had gained some new insights. A few said they had learned specifically about how older people view aging:

"They didn't think aging was so bad as it seems from where I'm looking at it."

"I've never really had older people to talk to about aging directly."

Some included in their answer thoughts about how different the older students' perceptions about literature were, and others were surprised that those perceptions were very much like their own.

The only student who answered in the negative explained:

". . . because I've been in contact with older people a lot, so it wasn't really a new experience for me."

(c) "Did the older students learn from the younger?"

Even those who were not so sure about what they had learned from the older students readily agreed that the older students had learned something from them. All thirteen students answered positively. Some of the responses follow:

"Nowadays older folks think teens are hoodlums. I imagine they might have seen that we're not all that rotten."

"They could see how things have changed."

"They got to see different sides, though I don't know if we always presented two totally different sides."

"I think they got just as much out of it as we did."

One boy summed up what most people expressed:

"Sure, everyone learns from everyone. It's that simple."

(d) "Were there any students--young or old--who made a special impression on you?"

Of the ten older students, eight were mentioned at least once as having made a special impression. Two were mentioned most often, one because he seemed more knowledgeable than everyone else, the other because he was an extraordinarily warm and friendly man.

Several students were unaware that their older classmates had never gone to college; some had thought they were sharing the classroom with retired teachers and professionals. At least half were surprised, especially in cases where the older students had proved themselves extremely well-read. One class member thought knowing this information beforehand would have given him still more reason to admire his older classmates.

(e) "Do you think the presence of the older students helped you to enjoy or understand the literature better? In what ways?"

Ten freshmen said that the older students had helped them to enjoy or understand the literature; three thought their impact was felt more in other ways. The majority recognized that the older students were examining the characters about whom they were reading with understanding sharpened by their own experiences:

> "They understood some aspects better than we did. Also, they got different meanings than we did in some cases. We helped each other."

> "When you have some people looking back, it gives you another point of view."

> "I felt it was a lot more interesting. Their point of view opened up the discussion a lot more."

One young man was grateful for the way they helped express some of his own insights:

> "Sometimes I would try to comment and I wouldn't know how to say it, and they would answer and I'd say, 'yeh--that's it!"

Other students were most interested in the older students' reactions to older people in the literature:

> "I was waiting to see how they would react to the people growing old in the stories."

(f) "Do you think the older students, any more than students your own age, held the class back in any way?"

Seven students denied the older students' having held the class back in any way. In his answer to this question one boy unwittingly described the English teacher's dream:

> "I don't think they held the class back, except with discussion. They'd all want to get their say in, and the freshmen did too, and so the discussions could get bogged down."

This question reminded five students of moments when their older classmates had trouble following directions, but they understood why this had occurred:

> "When we got an assignment they wouldn't always understand. Other than that, they were no different from the younger students. Now they'd know everything if they went into another class."

"Things we've been doing every year in school they haven't been exposed to--like the evaluation we filled in."

When asked if he thought the older students held the class back, one freshman, who found writing rather difficult, said with a surprised look,

"I thought I held the class back!"

(g) "Did you feel the older students were unfair competition to the younger students, any more than other students your own age?"

None of the younger students felt the older students had represented unfair competition, although one did envy their experience:

"I wish I had sixty-five years of experience. I could fill a book."

One young man said,

"No, some were better than I was and some were worse."

Six freshmen regarded the older students' having no other courses as being in their favor, but not unfair. Two others thought the situation was unfair at first, but after they were assured the instructor was not grading on a curve, they believed each individual would be graded fairly. One said,

"We used to think that they had nothing else to do, and we have so many other courses. By the end I saw that some [older students] were working full time. I figured they were treated the same as freshmen. You couldn't really have a course any other way."

Other comments were favorable:

"I think of the older students as being totally positive toward helping the younger."

"I think they brought out the best in us."

(h) "Did you become particularly friendly with any of the older students?"

Once again eight of the ten older students were mentioned at least once. Testimony to the extraordinary warmth and friendliness of the man chosen by so many as having made a special impression is that here he was also mentioned by over half the freshmen. Otherwise, those who made friends with older students usually had sat near them in class. As the freshmen mentioned the names of the older students with whom they had become especially friendly, their warm feelings were unmistakably genuine.

(i) "Did you ever feel any awkwardness discussing the life cycle theme with older students, especially when we discussed old age or death?"

All but one of the younger students told the interviewer that instead of feeling awkward when the class talked about death and old age, they were impressed by the optimistic attitudes held by their older classmates:

> "Before I thought that when I got older I'd be miserable. But they [older students] didn't really seem like that. They're not wrapped up in dying. I like their view much better. It seemed like the consensus was that old age is really great."

> "I didn't feel awkward, mostly because the way the older people looked at it [old age]. It didn't seem to bother them at all. Most would say, 'I'm looking forward to living another 80 years.' They were happy to let others know how they felt."

> "I would never hold anything back for fear they would get mad or anything like that. Whatever we said, if they disagreed they'd tell you."

> "It was interesting to see what people who were closer to the time of their death would think. No one seemed afraid to die. No one seemed really depressed. They all had very healthy attitudes toward death and old age."

The only young man who said he had felt some awkwardness expressed it this way:

> "A couple of times, when Barbara [the instructor] talked about A Death in the Family, she had to be really careful because it was so sensitive. Some of the older women were shaking their heads as if to say, 'It's not like that at all.'"

(j) "Do you think your attitude toward older people has changed from this experience?"

Ten students felt their attitudes had changed for the better. For example:

> "I always thought of older people sitting home. And now I see they can do things, go to class, have good discussions--in fact, the best discussions."

> "My grandmother and her friends were really proper Church-going gung-ho Christians and my brother was a hippie, and they'd pick on him. I had thought old people were too upright."

Three young men who felt that their attitude toward older people had not changed explained that they had always had good attitudes toward their elders, but that these attitudes had been reinforced by this experience. Nearly everyone, in fact, professed to have fairly good attitudes, a fact borne out by the pretest scores on the Student Opinion Questionnaire.

(k) "In what ways would Lehigh be different if we had older students in our classes?"

All the students thought Lehigh would be a better place with students of all ages, but nine wondered whether the presence of older students in science or engineering courses would make a difference. Their impact, they thought, would be strongest in discussion courses like English, history, philosophy, and government.

Concerned about how the older students might affect her own class standing in her major, one student complained:

> "This is where I have problems. I think with English or history it's fine. But I would be uncomfortable if they were in my major course of study. I'm hung up on getting grades, and engineering courses are curved. If these people are coming in to take a course just to better themselves, it might throw me off the curve."

Everyone else seemed more positive:

> "It would make learning more fun. I was really down on English before this class."

> "I think it would make a better atmosphere. A lot of people don't really have respect for older people and their eyes would be opened to the fact that they have good ideas and information to share. They give you lots to think about."

One student even envisioned the opportunity for stronger ties in the community:

> "You'd probably get a lot more interaction with the community. If you had people of all ages in all the classes, we'd probably work on projects together and they could come to the dorm or I could go to their homes. For more technical subjects I could use their help and they could use mine."

(l) "What was most memorable about this course?"

Some students recalled specific events like travelling to see That Championship Season, attending a party held by the older students at a local restaurant after the last class, and one man's disclosure about being a member of Alcoholics Anonymous and his offer of help to anyone who might need it. Others spoke of the friendliness and the fun in class. A few described the first day when they walked into class and walked right out because they were sure they were in the wrong room, or said to themselves, "Get me out of here!" A surprisingly large number confessed, "I didn't mind going to English class this semester," and several mentioned that the excellent discussions made the class memorable. A young woman who had at first been very negative toward the invasion of her class by "senior citizens" but is now suggesting a class reunion expressed herself with great enthusiasm:

> "I think I'll remember this class always. I really do. I really enjoyed it."

(m) "Are you sorry or glad to have been in this experiment?"

To this answer there was no hesitation; students were unanimously glad.

Interviews with Older Students

The project assistant interviewed the ten older students after interviewing the younger students. All the older students were aware by then of the nature of the study in which they had participated, and the interviewer was able to ask them about their thoughts on the intergenerational class, younger students, and their own sense of achievement. The questions are listed here in the order in which they were posed.

(a) "What kind of atmosphere do you think was created by the mixture of older and younger students?"

Everyone spoke about the very positive atmosphere in the intergenerational class. Five described it as "congenial";others called it "very pleasant," "accepting," "cooperative," "relaxed," and "stimulating." One man said it was "marked by a feeling of equality and a high rate of exchange of ideas and opinions." Another student thought it most remarkable that there was "total involvement" of all students, young and old. Some expressed their initial sense of insecurity about being accepted by the younger students in terms of surprise over the success of the class. For example:

> "I got the impression they actually liked being with us, and later some of them told us that they did."

> "We older people expected it to be pleasant, but I didn't think the young people did. I think they enjoyed it after all."

In their answers to a comparable question ("How do you think the presence of the older students in this English class made the atmosphere different from that in most other Lehigh classes?"), none of the younger students had mentioned anything negative. Most of the older students, however, referred to the strain on the first day when younger students looked "puzzled," "strained," or "resentful" about the make-up of the class. But those who described the strain at the beginning remarked how quickly the atmosphere had become relaxed and congenial. One man explained why he thought the atmosphere was so positive:

> "At first the atmosphere was strained, but after they got to know us they accepted us, and I think they accepted us because in the main I think we're an unpretentious group."

(b) "How would you have felt if you were the only older student in the class?"

Four students said they would have felt very much at ease being the only older student in a classroom, and four others said that age distribution had no bearing on how they felt in an academic setting. Two of these people had already attended classes in which they were the oldest, and three others explained that they had always been in the company of college students or else had college-aged children of their own. One man explained his position this way:

> "I think I would have felt more strange [if I had been the only older student], but I don't think I would have minded it because I don't believe in the generation gap."

Only two people said they would have felt "embarrassed" or "out of place" being the only older student in a college course. One said,

> "I would have been more self-conscious and more reluctant to express my opinion."

(c) "Do you think you learned anything from the younger students?"

In keeping with the younger students' responses, all older students said that they had learned something from their younger classmates. Most of them explained that they learned when they listened to young people's views about issues, views that were frequently different from their own. Several people agreed that their fears about this generation were "dispelled." For example:

> "I learned, much to my pleasant surprise, that, thank God, if they were typical of students throughout the country, you still have people for the future who know how to think and express themselves. I had some qualms about this generation, but they were dispelled."

Another man, who is head of his own firm, had a more personal appraisal of what he had learned from the younger students:

> "Personally I did [learn from the younger students]. I learned a little more patience and tolerance. I was able to accept more varieties of opinions than I would have [if I had been] in a more authoritative role."

(d) "Do you think the younger students learned from the older students?"

Everyone felt that the younger students had learned from the older, and that, as one man put it, the main thing they had learned was that "being over 65 doesn't mean you fold up and die." Another man talked about goals:

> "They learned that older people do have some kinds of goals as well as ideas for reaching them. They don't give up."

The younger students' learning to accept older people was important to another student:

> "I think maybe they learned to like older people better. They weren't going to ask us for dates or anything like that, but they found they could enjoy being in our company."

(e) "How would you describe your own contribution to this class?"

This question made almost all respondents laugh nervously; answers were as varied as a rather disheartened "terrible," a puzzled "I have no idea," and appraisals that were remarkably honest:

> "I tried to take part, but not to monopolize."
>
> "I hope it was my naturalness. I don't think it was my wisdom."
>
> "In my own small way I might have helped to keep the class going. I tried to invite others to participate."
>
> "[I contributed] by sticking my nose into everything that came up!"

Only two members of this group regretted not having participated more frequently. All the others thought they had contributed to the class in a positive way.

(f) "Do you feel that you gained more confidence in yourself by going through this course?"

Nine older students declared that they had definitely gained confidence over the course of the semester through self-discipline, acceptance of the challenge, or encouragement from the instructor.

> "Yes, it was an intellectual challenge that I met--that I haven't had an opportunity to experience for a great many years. It was refreshing. It gave me a sense of pride in myself."
>
> "Barbara gave me a lot of encouragement."
>
> "I had been looking to this program for direction and discipline, and I definitely disciplined myself."
>
> "My confidence was very low when I started this course. Recently I've been living like a hermit. I think I gained courage as time went on."

Only one woman denied having gained confidence in herself during the semester. She said,

> "Oh, I've always had confidence. I've never gained it or lost it. I'm just fresh!"

(We might note here that several students told the instructor independently that taking the course had boosted their self-confidence. One woman attributed her obtaining a tutoring job at a neighboring community college to having participated in this course. One man is seriously considering enrolling in a four-year college degree program, and another is busy revising poetry he wrote years ago in expectation of publishing.)

(g) "Were there any students, younger or older, who made a special impression on you?"

When the younger students responded to this question in their interviews, they invariably named two or three people without hesitation, and most named only older students until they were reminded that they might mention their peers. The typical response from the older students, however, included appreciation for young and old, and went something like this:

> "Well, there was Art and Sam, and Mary, who seemed so intelligent, and Jerry, the boy from South America, and Bob . . . and of course the other Bob . . . and the two girls who were so shy at the beginning . . . and that handsome boy in the corner, and Margaret--well, just everyone was special."

(h) "Do you think the presence of the younger students helped you to enjoy or understand the literature better? In what ways?"

All the older students agreed that they enjoyed and understood the literature better because the perceptions of the younger students were intelligent and usually different from their own. The participation of younger students affected the older students in various ways:

> "Since everyone projects his own reading into his own background, getting the opposite viewpoint from the younger students made the course more refreshing."
>
> "They [younger students] took such a deep interest in what was going on, and they participated constantly, giving their opinions and views."
>
> "They helped me to understand better how I felt at their age."
>
> "We older people get into a rut. If you're any kind of sensitive person you get impressions through the years, and many times the corners get rubbed off. With these young people the corners are still there."

(i) "How did you feel about taking a course with Lehigh students and being expected to write papers, take exams, and be graded according to the same standards?"

Without exception, everyone in this group regarded keeping up with Lehigh freshmen a challenge. A woman who had earned one of the two highest grades in the class said:

> "I loved every minute of it. I loved it. I spent an awful lot of time. I was up until 1:00 or 2:00 in the morning, and I usually go to bed at 9:15!"

Although all of these students knew that they were being graded by the same standards as the regular Lehigh students, no one thought the class environment was "competitive." As one man expressed it:

> "I never felt as if I was competing. It wasn't a contest but an opportunity to learn, to take something with me. I had something to offer because of the years I've lived and they had something to offer because of their freshness."

The older students had understood from the first that they were not going to be given any favors in the grading, and a few had doubted that they could succeed. For example:

"I thought at first it would be impossible. I was glad I at least made it. It was discouraging at first when a couple of us got a failing mark. We didn't understand it. Then I thought, 'So what.' And then I was at ease."

(j) "Do you feel differently toward college students now than you did before you took this course?"

Positive feelings about college students were expressed by all the older students, though only four acknowledged that their feelings had changed. These class members commented about the seriousness of the younger students:

"I was really surprised at how interested they were in what they were doing and how bright and cooperative they all were."

The rest of the older students declared that they had always thought college students were terrific; many had Lehigh graduates in their families, and a few had already pointed out to the interviewer that they were still close to college students.

One woman, explaining that she has been around young people all her life, exposed a negative feeling about other older people that seven of the ten older students also expressed at one point or another during their interviews:

"I've worked with young people all my life. I really have more trouble associating with the people I live with now. They're inclined to ask 'How do you feel?' every morning, and they do nothing else. I can relate much better to younger people. I'm not trying to act young or anything, but it's easier for me to relate to the young."

(k) "Did you ever feel that there was an awkwardness among the younger or older students when we discussed growing older or death?"

None of the older students thought either young or old were hindered by awkwardness when they talked about growing old or dying; in fact, they were proud that they could bring their experience to those discussions:

"The younger kids were very interested in our reactions and what we had to say about it [growing older and death]. They think death happens to everyone but them. They think of older people as being near death, and they were interested in our reactions."

One man summed up what most also implied in their answers:

> "After the first class, the ice had thawed sufficiently for us to be as frank, as candid, as honest as we wanted to be. There was no holding back."

(l) "Did you ever sense any hostility from any of the younger students at any time during the semester?"

Referring again to the first day, most acknowledged that their younger classmates seemed reserved at the beginning, but they were not willing to call it "hostility." One older woman, however, revealing her own negative stereotyping of other older people, had feared a hostile reaction that never emerged:

> "The one thing I was deathly afraid of was hostility. I was afraid someone [older] would take over the class and insist upon his or her own views."

Another woman was surprised at the gentleness of the young men in the class:

> "They were very helpful. When they'd see me coming up the walk they'd take my arm, which surprised me."

The absence of hostility, affirmed very strongly by everyone, was best expressed by one man who responded,

> ". . . no hostility, no antagonism, no sense of competition, no showing off, no air on the part of anyone that said, 'I'm going to show these kids,' or 'I'm going to show these old timers.' That's what I liked so much about the class. It was very highly integrated."

(m) "Would you prefer a course in which you are with people of different age groups or in which everyone is about your own age?"

Eight people said that they preferred classes with people of different ages. For example:

> "Unquestionably [mixed classes]. That's the only way you're going to get any diversity."

One woman admitted to having changed her mind about intergenerational classes after being in this class:

> "If you had asked me before I attended this particular class, I would have said [with people] my own age. But now I would say the mixed group is better."

The two who did not decidedly prefer classes of mixed ages said they really had no preference.

(n) "Do you prefer taking a course for credit, or would you prefer to audit a course?"

The challenge of taking a course for credit appealed to six out of ten older students. That it "was something to work for," "gave me a sense of accomplishment," and "was more satisfying," were some of the reasons given. Only one person said she would prefer to audit if she took another course, and the remaining three felt that they themselves were such enthusiastic students that they would work just as hard in any class, whether or not credits were to be awarded. But they all admitted, in the words of one older student who clearly had struggled to improve her writing skills,

"I'm very proud of those credits!"

(o) "What was most memorable about this course?"

Everyone struggled to decide what was most memorable about the course. Three people chose the instructor as the one who made everything that happened in the class memorable. Three others chose more personal aspects: "the targeting of a goal," "my comma splices," and "my 3.7 average." One person thought the special events, particularly the presence of two visiting professors, were most memorable. Two others, expressing a sentiment that all the older students mentioned at least once during their interviews, decided that the best part of the course was the mixture of age groups. For one man the most memorable day was the one when

". . . Barbara shushed me when Jerry and I were talking out of turn . . . She wasn't impressed by my years. I was just another student."

In Short

The ten older learners in the present study integrated successfully with their 14 young classmates. They presented neither a threat nor a hindrance in the classroom, and, by the end of the semester, they achieved the same proficiency in writing skill as did the young students in the class. They appreciated being treated as peers with the younger, "regular" students, taking pride in being graded by the same standards and in not being given special consideration because of their age. Nearly all said they had gained self-confidence from participating in this class. We added an item to the older students' Student Opinion Questionnaire post-test, an item not included in the analysis. All ten older students answered "Agree" to this statement, which read: "I would like to go on to take another college course after this one."

Problems expected by some of our colleagues simply did not occur. The older people themselves, afraid of the stereotype of the elderly person who talks too much, were careful not to "take over" in class discussions. Their fear of not being accepted by the younger students was dispelled early in the semester. They seem to have stimulated better discussions of literature, as shown in the larger number of ideas per class discussion, than was evident in the comparable all-freshman class. Their openness and eagerness to learn made them attractive, easy-to-teach students; the experience they brought to the study of composition and literature provided a welcome challenge to the instructor as well as to their younger classmates.

Intergenerational learning seems to have been a beneficial experience for young and old alike; in interviews, all students expressed positive feelings toward being in class with people of the other age group, and most expressed a preference for mixed classes. Younger students enjoyed the older students' depth of experience and breadth of perspective, and older students felt they had learned something from their young classmates' freshness, interest in learning, and self-discipline. Younger and older students felt free to open up in front of each other in class and to disagree with each other on points of discussion; the intergenerational class make-up appears to have helped create an atmosphere in which enthusiastic exploration of the subject matter was the norm.

SUMMARY AND CONCLUSIONS

Purpose

The primary purpose of this study was to determine whether the attitudes and performance of college freshmen would be affected by the presence of older students in the college classroom.

We were specifically concerned, first, with seeing whether the experience of participating in an intergenerational class, containing an approximately even mix of 18- and 19-year-old second semester freshmen and students 60 years of age and older, and in which the theme of the life cycle was used as an approach to composition and literature, would influence younger students' attitudes in three dimensions: toward their own aging, toward older people as a group, and toward intergenerational classes. We also wished to learn whether participation in such a class would affect the older students' attitudes toward intergenerational classes, younger people as a group, and their own capacity for learning in a college environment.

By observing and coding specific class activities we also wished to determine whether an intergenerational class composition would affect the amount and type of class activity in a discussion format. In addition, the study was concerned with learning whether younger students' performance on written essays would be affected by their participation in an intergenerational class of this nature.

A secondary concern of the study was to determine whether in a class composed entirely of 18- and 19-year-old college freshmen, the students' attitudes toward their own aging and toward older people as a group would be changed after they had participated in a composition and literature course in which the theme of the life cycle was used as a central approach.

The educational experiences tested in this study offered the participants a number of things. The older students, none of whom had a college degree and most of whom had little or no formal education beyond high school, could test their skills in a regular college classroom in which they were expected to perform, for college credit, on the level of college freshmen. They also had an opportunity to interact with younger students as peers in a college classroom. The younger students in the intergenerational class were able to test their ideas against the life experience of older students. They could interact socially with people of their parents' and grandparents' ages who were doing exactly the same academic work as they for this class. The instructor was given an unusual opportunity to find ways to use the composition of an intergenerational class to enhance learning for students in both age groups and to try to satisfy the needs of both groups through one course.

Specifically, this study addressed the following questions:

1. Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

2. Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

3. Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

4. Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

5. Will the college freshmen's attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

6. Will the older students' attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

7. Will the older students' attitude toward younger pe ple as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

8. Will the older students' attitude toward their own success in a college class be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

9. Will the amount and nature of class activity (participation, whispering, eye contact, and laughter) be different in the two experimental groups (the intergenerational class and the all-freshman class, both studying composition and literature with the life cycle as a central theme)?

10. In the intergenerational class, will the older students "take over"? That is, will they participate so much in class discussions that they prevent the younger students from participating at as high a rate as their counterparts in the experimental all-freshman class?

11. Will the younger students in the intergenerational class show more or less improvement than their counterparts in the all-freshman class in a comparison of their first and final writing assignments?

A concomitant purpose of the study, one for which our experimental methodology could provide no hard data, was to give some credence to two hypotheses: first, that older people, when placed in a regular college composition and literature course, do just as well as traditional college-aged freshmen and can do so without any more special attention or remedial help than regular freshmen receive, and second, that the experience of studying in an intergenerational class can be a positive one for students in both age groups. To gather information that might help us make observations on these hypotheses and interpret the results of the Student Opinion Questionnaire, the project director (instructor) and project assistant (observer) made daily diary entries on student interaction and class discussions. In addition, the project assistant tape-recorded all class sessions of the two experimental groups and interviewed younger and older students in the intergenerational class.

As an integral part of the study, a freshman composition and literature course was designed, entitled "The Life Cycle in 20th-Century American Literature." This course was taught to the two experimental sections--an intergenerational class and an all-freshman class--as an illustration that the theme of the life cycle can be used as a meaningful and stimulating approach to teaching and learning both writing and literature. An annotated bibliography entitled "The Life Cycle: An Annotated Bibliography" has also been written, based on the experience of designing and teaching this course.

Background and Need for the Study

Educators are now realizing that the future population of colleges and universities is likely to include higher proportions of older people than ever before because of shifts in the population. As the number of young people decreases, educational institutions may need to change their focus to include older persons as a larger part of their constituency; research on the effects of intergenerational classes on attitudes and performance of regular undergraduates, on attitudes of older persons, and on classroom activity could provide them with data on what to expect in an intergenerational student body.

This study was designed essentially to learn something about what happens when younger and older students find themselves together as peers in the college classroom. Unlike many other studies, no effort was made to create a "positive" series of contacts between the generations, nor was the course itself intended to educate students about "aging" as such. A course was given, the mix of young and old was there from the first day of class, and the life cycle theme was used as any other thematic approach might be used to teach composition and literature.

Research Procedures

This study utilized the pretest - treatment - posttest design. Two treatment groups were enrolled separately in two sections of second-semester freshman English: one an intergenerational class made up of fourteen 18- and 19-year-old Lehigh University freshmen and ten non-matriculating, for-credit students 60 years of age and older; the other a regular all-freshman class. Both sections studied composition and literature with the theme of the life cycle used as a central approach. The control group consisted of three sections of the same course, all composed of regular Lehigh freshmen, without the superimposition of the life cycle theme.

A Student Opinion Questionnaire containing five separate scales was utilized to measure the following attitude changes: those of younger students toward their own aging, older people as a group, and intergenerational classes; those of older students toward intergenerational classes, younger people as a group, and their own capacity for learning in a college class. The questionnaire uses a modified version of the format of the Kogan O. P. scale, giving respondents a choice among four responses: "Agree," "Mildly Agree," "Mildly Disagree," and "Disagree." Six items are borrowed directly from the Kogan O. P. scale; all others are original to this study. Items are mixed randomly in the actual questionnaire, without respect to the scale from which they come.

The means of activity (participation, whispering, eye contact, and laughter) per 75-minute class in the two experimental classes were compared to determine whether there was any difference in amount and type of activity between the groups, and whether individual younger students in the intergenerational group participated more or less than their counterparts in the all-freshman class.

The improvement in performance on essays written by younger students in the two experimental classes was analyzed to determine whether the younger students in the intergenerational class showed more or less improvement over the course of the semester than their counterparts in the all-freshman class.

In addition, the instructor and observer kept diaries on student interaction and quality of class discussions. The observer tape-recorded all class sessions of the two experimental groups and interviewed younger and older students in the intergenerational class after the end of the semester.

Information gathered through these means has been used to help interpret results of the Student Opinion Questionnaire and to make the numerous observations on older learners and the intergenerational class (see OLDER LEARNERS AND THE INTERGENERATIONAL CLASS: SOME OBSERVATIONS).

Results and Conclusions

(a) Analysis of Student Opinion Questionnaire

Analyses of responses to the five scales of the Student Opinion Questionnaire were intended to answer eight specific questions. Each of these questions is cited here together with the number and name of the scale written to answer it; the mean scores for the pretest and posttest and the statistical and analysis are shown for each scale.

In all subsequent discussion of students' responses to items in the questionnaire, the term "positive response" indicates a positive attitude toward the subject dealt with by the scale or item under discussion, regardless of the wording of items. "Positive attitude" indicates a positive attitude toward the topic under question. A "high score" indicates a positive attitude.

For the younger students enrolled in the five sections of freshman English, an analysis of variance in the pretest for each scale that pertains to younger students failed to reach significance at the .05 level; we concluded that the younger students in all five sections could be considered of the same population in terms of attitudes on these three scales. We were dealing with 90 freshman students: 21 in the all-freshman experimental group, 19, 19, and 17 in the control groups, and 14 freshmen in the intergenerational class.

Scale 1: Younger Students' Attitude Toward Their Own Aging

We asked the following two questions with this scale:

(1) Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

(2) Will the college freshmen's attitude toward their own aging be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

The freshmen in the intergenerational class showed significant changes in the positive direction toward their own aging, according to an analysis of variance, $p < .05$. The all-freshman experimental class showed no change, nor did the control group. It seems that the affective component of attitude

was changed by the combination of the course and the presence of older students in the class.

Scale 2: Younger Students' Attitude Toward Older People as a Group

We asked the following questions with this scale:

(1) Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

(2) Will the college freshmen's attitude toward older people as a group be more positive after they have participated for a semester in a regular college class, with students of their own age, in which the theme of the life cycle is used as an approach to composition and literature?

Although the scores of the freshmen in the intergenerational class rose (moved in the positive direction) slightly more than the scores in the other groups, the change did not reach statistical significance. Scores were high at the beginning of the semester; the posttest seems to indicate that an already positive attitude simply remained positive. There was also no change in the experimental all-freshman group.

Scale 3: Students' Attitude Toward Intergenerational Classes

We asked the following two questions with this scale:

(1) Will the college freshmen's attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

(2) Will the older students' attitude toward intergenerational classes be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

While no significant change occurred in the older students' attitude, the attitude of the younger students in the intergenerational class rose significantly ($p < .01$). It is not surprising that the older students did not change; their attitude at the beginning of the semester was so positive that their scores could not have moved very far in the positive direction.

Scale 4: Older Students' Attitude Toward Younger People as a Group

With this scale, we asked one question:

> Will the older students' attitude toward younger people as a group be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

A paired t-Test showed no change in the attitude of older students toward younger people as a group. Just as on Scale 3, this group's score on Scale 4 was high at the start of the semester.

Scale 5: Older Students' Attitude Toward Their Own Success in a College Class

With this scale, we asked the following question:

> Will the older students' attitude toward their own success in a college class be more positive after they have participated for a semester in an intergenerational class in which the theme of the life cycle is used as an approach to composition and literature?

The older students' anticipation that they would do well was extremely high at the beginning of the semester. A paired t-Test showed no significant difference in their attitude from the beginning to the end of the course.

(b) Analysis of Observations

Analyses of the observations recorded with the observation coding system were intended to answer two basic questions:

(1) Will the amount and nature of class activity (participation, whispering, eye contact, and laughter) be different in the two experimental groups (the intergenerational all-freshman classes, both studying composition and literature with the life cycle as a central theme)?

(2) In the intergenerational class, will the older students "take over"? That is, will they participate so much that they prevent the younger students from participating at as high a rate as their counterparts in the experimental all-freshman class?

In response to the first question, we compared the means for the amounts of class activity per student per 75-minute class in the intergenerational and all-freshman classes. The rate of participation (talking aloud) per student per 75-minute class was significantly higher in the intergenerational

class than in the all-freshman class, t (19) = 5.41, $p < .01$. The rate of whispering "per student per 75-minute class" in the intergenerational class was significantly higher than in the all-freshman class, t (19) = 4.22, $p < .01$. The rate of laughter "per 75-minute class period" in the intergenerational class was also significantly higher than in the all-freshman class, t (19) = 3.17, $p < .01$. Eye contact without whispering occurred so infrequently in both classes that we could not measure it.

In response to the second question, we compared the mean amounts of participation per freshman per 75-minute class in the two experimental classes. A paired t-Test reveals no significant difference between the two scores, t (19) = 1.55. A comparison of activity per freshman per 75-minute class in two particular categories (combination of direct interaction among students during discussion and students' adding to what their classmates said in discussion) also showed no statistical difference. We concluded that the greater activity of the older students accounted for the difference in total activity between the two classes but did not prevent the younger students in the intergenerational class from engaging in class activity at as high a rate as their counterparts in the all-freshman class.

(c) Analysis of Younger Students' Performance on Written Essays

Analysis of younger students' performance on written essays in the two experimental groups was intended to determine whether the essays of younger students in the intergenerational class would show more or less improvement than those of students in the all-freshman class. The students in the all-freshman class improved, paired t (20) = 2.89, $p < .01$. The average increase of grade point in this class from the beginning to the end of the semester was .51. The freshman students in the intergenerational class also improved, paired t (11) = 2.33, $p < .05$; the average grade increase was .67. The increase for the intergenerational class was not significantly greater than for the all-freshman class, t (31) = .0.50, $p < .10$. We concluded that the presence of older students in the intergenerational class did not have any effect on the level of improvement exhibited by the freshmen in that group.

IMPLICATIONS

The findings of this study provide several implications for educators. The major focus of the study was to create a situation in which a nearly even mix of older and younger students studied together as peers in a discussion-format college class and in which neither group was treated in any special way. It was thought that if students in both age groups began to identify with the mixed group as a whole, certain attitudes might change: younger students' attitudes toward their own aging, toward older people as a group, and toward intergenerational classes; older students' attitudes toward intergenerational classes, toward younger people as a group, and toward their own capacity for learning in a college class. It was also thought that the amount and type of class activity in the intergenerational class might be different from those in an otherwise similar all-freshman class, the underlying assumption being that a greater amount of participation and interaction among students indicates a higher level of interest in the class. The researchers wished, additionally, to determine whether the presence of older students would affect the level of improvement in the younger students' written essays from the beginning to the end of the semester.

Evidence from this study shows that an educational experience in which older students study for credit in a regular freshman English class can change the attitudes of younger students toward their own aging and toward intergenerational classes. The younger students' responses on the posttest indicate that they thought far more positively about their own aging at the end of the semester than at the start, and that they viewed the idea of an intergenerational mix in the classroom more positively after they had experienced just such a class. The study also found that the quality of interaction in the intergenerational class was significantly better than in the all-freshman class when measured by numbers of instances of participation, whispering, and laughter per day. The greater amount of activity in the intergenerational class, attributable to the older students' presence, did not, however, keep younger students from participating at as high a rate (per student) as their counterparts in the all-freshman class. The presence of older students also did not keep the younger students from improving their performance on written essays by at least as much as their fellow freshmen in the all-freshman class.

The implications are important. First, younger students can benefit in several ways from contact with older students in the college classroom. Their anticipation of aging can be modified to the point where they see themselves in the future as capable, energetic, and admired older people. To the extent that people fulfill their own prophesies, such an attitude change could make for more successful aging, at least in terms of self-concept. Their changed attitude toward intergenerational classes indicates that this experience was a highly positive one for them, a sentiment all also expressed in the personal interviews at the end of the semester. Contrary to the expectations of numerous faculty members who feared that the older students would represent at best a novelty in the class, and at worst a problem, this result shows that the younger students found the older students brought

something to class that they would like to experience again. The fear that older students "spoil" things in the class is simply unfounded.

That the amount of activity in the intergenerational class was greater than in the all-freshman class is another indicator of increased interest in this class. While the instructor "felt" that this class was livelier and therefore easier to teach, the data actually show significant differences in the kinds of class activity that make a discussion-format class successful: direct interaction between students in discussion (students' answering each other's comments and questions), students' making comments that add to what another student has just said, the simple answering of questions, and laughter. Instructors who use this teaching technique should welcome the presence of older students, who seem actually to help stimulate productive discussion.

Second, the myth that older students will somehow take away learning opportunity from younger students appears to be rebuked by evidence from this study. Younger students in the intergenerational class participated, per student, at the same rate as their counterparts in the all-freshman class. They were not "squelched" by their older classmates' enthusiasm. Indeed, although the difference is not statistically significant, the direct interaction and adding to discussion per student per class session is slightly higher than in the all-freshman class. And the fact that freshmen in the intergenerational class improved their performance on written essays by at least as much as their fellow freshmen in the other experimental group shows that they certainly were not harmed in any tangible way. This result has important implications for the highly competitive college student of the 1980's, who would balk at any situation that compromised his or her chances for achieving a high grade.

Even the test results that show no significant change are important to note. The younger students' attitude toward older people as a group was more positive than expected in the pretest; their failure to change does not mean that a low attitude remained low. It may indicate that a high regard for older people was reinforced. Likewise, the older students' attitude toward intergenerational classes, younger people as a group, and their own capacity for learning started high and did not change significantly. These attitudes should imply to educators that older students may be more favorably disposed to studying together with younger students, as peers in the classroom, than is often assumed. The idea that older people should be given separate, non-credit, simplified courses certainly did not appeal to these ten students. Perhaps educators have been underestimating the capacity of older persons for learning. And, although not part of the research design, a look at the grades earned by the older students provides an indicator that they performed as capably as their younger classmates. The average final grade of the freshmen in the intergenerational class was "B"; the average of the older students was the same.

The findings of this study should provide a challenge to educators who wish to provide stimulating courses for both young and old. While a certain number of courses designed especially for older adults are probably necessary, educators need to begin thinking of older people as a part of the clientele for regular college classes, particularly those in which discussion is used as a primary teaching technique. The exchange between generations does more than help older and younger students understand each other; it provides a stimulating atmosphere for learning, in which the benefits accrue not only to the older but to the younger students as well.

RECOMMENDATIONS FOR FURTHER RESEARCH

The limitations of this study listed on pages 6 and 7 lead to several recommendations for additional research on intergenerational classes.

That the intergenerational class received two treatments, the imposition of the life cycle theme plus the intergenerational mix, confounds the interpretation of results. In order to determine whether the mix of age groups alone in a discussion-type class leads to changes in attitudes, the experiment should be repeated with four classes in a 2 x 2 design, one intergenerational class taking the course using the life cycle theme and another intergenerational class simply taking the regular composition and literature course, one all-freshman class taking the course using the life cycle theme and another simply taking the regular course. Had it not been for economic constraints, we would have carried out this study with the 2 x 2 design.

Because of the extremely small population tested in this study, we hesitate to generalize from the experimental data. Future studies might survey a larger population of younger and older students in intergenerational discussion-format classes, possibly including a cross-section from several different universities and in more than one discipline: history, sociology, literature, government, and philosophy, for example.

Experimental data on class activity, coupled with the younger students' enthusiastic comments about their older classmates' contributions to discussion, lead us to believe that the presence of older learners in a discussion-type class can be a benefit to the entire class and that the teaching method itself may have something to do with positive attitude changes on the part of younger students. Subsequent studies might research the intergenerational mix in various other classroom formats: lecture, lecture paired with seminar, mixed lecture-and-discussion, and laboratory work.

That the project director taught the two experimental sections is listed in the report as a limitation. However, we also believe that the instructor's confidence in the older students' abilities, stemming from her knowledge of and previous working experience with older persons, allowed her to treat the younger and older students equally in the classroom. It is recommended that educators as a group become more knowledgeable about aging and older people so that when they encounter older learners in the classroom they will be able to deal with them from a realistic perspective rather than with the fearful attitude expressed by so many people in the university community.

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Appendix A: NEWSPAPER ARTICLES
ANNOUNCING COURSE

The Sunday Journal,
October 5, 1980

Tuition-free class offered for adults

BETHLEHEM — Ten area residents sixty years of age or over will be offered the chance to learn writing skills and to study modern American Literature side-by-side with college freshmen this spring at Lehigh University.

People 60 and older, who would like help with their writing and who would enjoy interaction with young students are encouraged to apply for the tuition-free course, for which they will receive full college credit.

In anticipation that a mix of generations will stimulate discussion and benefit all class members, the class will be divided evenly between college freshmen and older persons.

All students in the class will participate fully and be expected to meet the normal requirements of the course, which include reading literature, writing themes and taking examinations.

The composition and literature course, which will meet twice weekly during the spring semester from January 15 through May 2, will examine the writings of such authors as Ernest Hemingway, Willa Cather, Robert Frost and Katherine Ann Porter. A primary focus of the semester's work will be the improvement of each student's writing skills.

Interested persons may call Barbara Jensen-Osinski in Lehigh's department of English at 861-3331 or 838-6858 for more information and application forms.

This article originally appeared in The Free Press last week.

THE GLOBE-TIMES, BETHLEHEM, PA. — WEDNESDAY, OCTOBER 1 . 1980 D

60-Year-Olds Invited To Share Course at LU

Ten area residents 60 years of age or over will be offered the chance to learn writing skills and to study modern American literature side by side with college freshmen this spring at Lehigh University.

Anyone 60 and older who would like help with their writing and who would enjoy interaction with young students are encouraged to apply for the tuition-free course, for which they will receive full college credit.

In anticipation that a mix of generations will stimulate discussion and benefit all class members, the class will be divided evenly between college freshmen and older persons.

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Interested persons may call Barbara Jensen - Osinski in Lehigh's department of English for more information and application forms.

Appendix B: STUDENT APPLICATION FORM
(for older students)

Student Application

English 2 Department of English, Lehigh University
"The Life Cycle in 20th-Century American Literature"

Name: _____ Date: _____

Address: _____

Telephone No.: _____ Social Security No.: _____

Name and Location of High School: _____

_____

Date of High School Graduation : _____

Other Educational Background: _____

_____

So that we may know something about your writing, we would like you to answer two of the three questions listed here. Please answer each of the two questions with one or two short paragraphs. (each paragraph should contain fewer than 100 words.)

You do not need to type the paragraphs. You may either use the back of this form or attach a separate sheet of paper.

There are no "right" or "wrong" answers to these questions. Simply share your own experiences in clear, straightforward language.

1. Describe a situation in which your ability to write was an advantage. For example, you might tell about a particular crisis in which you were able to write a message that saved the day, or about a time when your own writing made you or someone else feel good.

2. Describe a situation in which you found your writing ability inadequate to meet a demand. For example, you may tell about a time when you tried to give clear instructions and someone misunderstood you. What were the results?

3. Tell how a fictional or news story, movie, play, or documentary helped you understand some part of your life. Do not re-tell the story; just relate how and why it affected you, personally.

Appendix C: COURSE SYLLABUS FOR TWO EXPERIMENTAL CLASSES

SYLLABUS FOR ENGLISH 2: COMPOSITION AND LITERATURE

Theme: The Life Cycle in 20th-Century American Literature

Department of English
Lehigh University

Spring 1981 B. Jensen-Osinski, Instructor

Session	1	Opening class: Introduction to course	
	2	"The Dogwood Tree: A Boyhood," by John Updike	Norton, pp. 2174-2199
	3	"Old Mortality," by Katherine Anne Porter (Part I)	Porter, pp. 107-137
	4	"Old Mortality" (Parts II & III)	Porter, pp. 138-182
	5	"The Rich Boy," by F. Scott Fitzgerald	Norton, pp. 1618-1648
	6	First essay due; "Departure," by Sherwood Anderson	Norton, pp. 1560-1562
	7	"Asphodel, That Greeny Flower," by William Carlos Williams; May Sarton poem	Both poems on mimeographed sheets to be distributed
	8	Discuss themes; A Streetcar Named Desire, by Tennessee Williams	Williams, pp. 13-142
	9	Streetcar, continued	
	10	A Death in the Family, by James Agee	Agee, pp. 11-318
	11	A Death in the Family, continued	
	12	Second essay due; "Separating," by John Updike	Norton, pp. 2199-2208
	13	That Championship Season, by Jason Miller	Miller, pp. 3-48

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Session	14	*That Championship Season*, continued	
	15	Midterm Examination	
	16	*The Moviegoer*, by Walker Percy	Percy, pp. 11-191
	17	*The Moviegoer*, continued	
	18	"The Love Song of J. Alfred Prufrock," by T. S. Eliot	Norton, pp. 1219-1223
	19	Third essay due; selections by Florida Scott-Maxwell	On mimeographed sheets to be distributed.
	20	"The Foreigner," by Sarah Orne Jewett	Norton, pp. 524-544
	21	"The Old Order," by Katherine Anne Porter	Porter, pp. 11-33
	22	*Seize the Day*, by Saul Bellow	Norton, pp. 1953-2031
	23	*Seize the Day*, continued	
	24	Fourth essay due; "Lucinda Matlock," by Edgar Lee Masters; "Miniver Cheevy" and "Mr. Flood's Party," by E. A. Robinson	Masters on mimeographed sheet; Robinson in Norton, pp. 1087 and 1097-1098
	25	"Neighbour Rosicky," by Willa Cather	Norton, pp. 1491-1516
	26	"The Source," by Katherine Anne Porter	Porter, pp. 3-10
	27	Final essay due; read selections by Florida Scott-Maxwell and poem by May Sarton	On mimeographed sheets
	28	Review and revise final essays in class	

English 2 Syllabus, p. 3

Texts for Course:

The Norton Anthology of American Literature, Vol. 2, Gottesman, et al. eds. New York: W. W. Norton & Co., 1979.

Agee, James. A Death in the Family. New York: Bantam, 1971.

Miller, Jason. That Championship Season. New York: Dramatists Play Service, Inc., 1972.

Percy, Walker. The Moviegoer. New York: Avon, 1980.

Porter, Katherine Anne. The Old Order: Stories of the South from Flowering Judas, Pale Horse, Pale Rider, and The Leaning Tower. New York: Harcourt Brace Jovanovich, 1955.

Williams, Tennessee. A Streetcar Named Desire. New York: Signet, 1973.

Appendix D: ORAL INSTRUCTIONS USED IN PILOT OF STUDENT OPINION QUESTIONNAIRE

I am here to ask you to take a test that has no right or wrong answers.

The questionnaire that you will fill out today is designed to measure your attitudes about older and younger groups of people and about how you personally feel about aging.

Please follow along as I read the instructions.

* * * * *

[Test Administrator reads aloud the printed instructions on front of questionnaire]

* * * * *

NOTE: 1. Circle only one answer for each item in the questionnaire.

2. Again, please answer every item.

It may happen that an item does not apply to you or your own situation. If this is the case, simply try to imagine yourself in that situation.

FOR EXAMPLE:

"When I retired, I felt elated."

Several items in this questionnaire have to do with how you feel about being in a college classroom. In order to answer these questions, simply imagine that you are presently taking a typical college course.

If you find that you think you are being inconsistent, don't worry, and don't go back over the answers that you have already finished. Most people do feel, in a test like this, that they are being inconsistent. Actually, it has been determined by researchers who design questionnaires that your "gut" response--or the one that hits you first--is the response that best indicates your true feelings.

NOTE ON APPENDICES E AND F:

Both questionnaires shown on the following pages are pretest versions. Where appropriate, modified posttest items are typed in italics below corresponding pretest items.

Appendix E: STUDENT OPINION QUESTIONNAIRE,
VERSION x FOR OLDER STUDENTS

STUDENT OPINION QUESTIONNAIRE

Age	Sex	Last four digits of telephone No.	Last four digits of Social Security No.	Date	Section
___	___	_____	_____	____	_____

INSTRUCTIONS

This questionnaire is designed to measure your attitudes about older and younger people and about how you personally feel about aging. It has no "right" or "wrong" answers.

On the following pages, please place a circle around the letter or pair of letters that most closely corresponds to the way you feel about each statement.

For example:

The older I grow, the wiser I become. A (MA) MD D

Please respond to every statement, and circle only one response to each statement.

Some statements contain references to "younger people" and "older people" as groups. For the purposes of this questionnaire, please think of "younger people" as those between the ages of 18 and 25, and "older people" as those 60 years of age and older.

Other statements, such as the example shown above, refer to your own growing older. To respond to these statements, simply think of yourself in the present, looking toward your own future.

If a particular item does not apply to you or your situation, please answer it anyway, imagining yourself in that situation. An example of such a statement might be "When I retired, I felt elated."

Several statements in this questionnaire have to do with how you feel about being in a college classroom. In order to answer these questions, simply imagine that you are taking a typical college course.

If you feel that you are answering the items inconsistently, don't worry. Most people do feel that they are being inconsistent when they fill out a questionnaire like this. Please do not go back over the answers you have already given. It has been determined by researchers who design questionnaires that your "gut" response--the one that hits you first--is the response that best indicates your true feelings.

Thank you!

		AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
1.	Now that I am over 60 years of age, I am very happy to be my age.	A	MA	MD	D
2.	College classes are better when they're made up of people of mixed ages.	A	MA	MD	D
3.	When I retired, I felt depressed.	A	MA	MD	D
4.	Now that I am over 60 years of age, I look ugly.	A	MA	MD	D
5.	It is difficult to trust most younger people.	A	MA	MD	D
6.	The most stimulating classroom discussions occur among people of different ages.	A	MA	MD	D
7.	Most older people are very different from one another.	A	MA	MD	D
8.	When I retired, I felt that I had reached a happy time of life.	A	MA	MD	D
9.	The older I grow, the more I expect to lose my health.	A	MA	MD	D
10.	In a college classroom older people would probably not be able to keep up with the work.	A	MA	MD	D
11.	Now that I am over 60 years of age, I am busy with activities I like.	A	MA	MD	D
12.	Most older people make one feel ill at ease.	A	MA	MD	D
13.	I feel I am a good contributor to discussions.	A	MA	MD	D
14.	Now that I am over 60 years of age, people admire me.	A	MA	MD	D

x

		AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
15.	Most younger people have their own ways and have a hard time changing.	A	MA	MD	D
16.	Most older people have their own ways and have a hard time changing.	A	MA	MD	D
17.	Now that I am over 60 years of age, my mind is as sharp as ever.	A	MA	MD	D
18.	In general, most older people are pretty much alike.	A	MA	MD	D
19.	Younger people and older people do not learn well together in the same classroom.	A	MA	MD	D
20.	Now that I am over 60 years of age, I am depressed.	A	MA	MD	D
21.	I would not change the rate at which time passes, even if I could.	A	MA	MD	D
22.	Now that I am over 60 years of age, sex is a pleasure.	A	MA	MD	D
23.	The older I grow, the more I expect to worry about death.	A	MA	MD	D
24.	Now that I am over 60 years of age, I am popular.	A	MA	MD	D
25.	College classes should be made up only of people in my general age group.	A	MA	MD	D
26.	The older I grow, the more I enjoy life.	A	MA	MD	D
27.	When I finished high school, I felt frightened.	A	MA	MD	D
28.	Most older people have nothing new to say.	A	MA	MD	D

x

		AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
29.	When my first child (niece, nephew, child of close friend) finished high school, I began to worry about my age.	A	MA	MD	D
30.	My best learning days were over some time ago.	A	MA	MD	D
31.	Most younger people are very different from one another.	A	MA	MD	D
32.	Most younger people bore others by their insistence on talking about their own experiences.	A	MA	MD	D
33.	Now that I am over 60 years of age, I am bored.	A	MA	MD	D
34.	I hesitate to talk during discussions.	A	MA	MD	D
35.	Most older people are cheerful, agreeable, and good humored.	A	MA	MD	D
36.	Younger people have nothing new to say.	A	MA	MD	D
37.	If I could control time, I would slow it down.	A	MA	MD	D
38.	Now that I am over 60 years of age, I depend on others quite a bit.	A	MA	MD	D
39.	I think I will have trouble keeping up with the reading and writing in this class.	A	MA	MD	D
	(Posttest) I had trouble keeping up with the reading and writing in this class.				
40.	Now that I am over 60 years of age, I have a healthy outlook on life.	A	MA	MD	D
41.	When I became a grandparent (great aunt, great uncle), I felt elated.	A	MA	MD	D

x

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
42. Now that I am over 60 years of age, I wish I were younger.	A	MA	MD	D
43. Most younger people make one feel ill at ease.	A	MA	MD	D
44. The older I grow, the more conformist I become.	A	MA	MD	D
45. Younger people often don't know what is really important in life.	A	MA	MD	D
46. The older I grow, the more I expect to decline.	A	MA	MD	D
47. Most older people are capable of new adjustments when the situation demands it.	A	MA	MD	D
48. Classes made up of only one generation of students are unnatural and limiting.	A	MA	MD	D
49. Now that I am over 60 years of age, people feel sorry for me.	A	MA	MD	D
50. Now that I am over 60 years of age, I feel out of shape.	A	MA	MD	D
51. The older I grow, the more individual I become.	A	MA	MD	D
52. The most stimulating classroom discussions occur among people of about the same age.	A	MA	MD	D
53. The experiences I bring into class discussions will probably help bring out important points.	A	MA	MD	D

(Posttest) The experiences I brought into class discussions probably helped bring out important points.

x

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
54. Younger people and older people would find it hard to open up in front of each other in the classroom.	A	MA	MD	D
55. Now that I am over 60 years of age, I feel vigorous.	A	MA	MD	D
56. Now that I am over 60 years of age, I feel forgotten.	A	MA	MD	D
57. I expect to keep up just fine with reading and writing assignments.	A	MA	MD	D
(Posttest) I kept up just fine with reading and writing assignments.				
58. The older I grow, the more my opinions are respected by others.	A	MA	MD	D
59. Most younger people are capable of new adjustments when the situation demands it.	A	MA	MD	D
60. When I became a grandparent (great aunt, great uncle), I felt bad about being old.	A	MA	MD	D
61. Now that I am over 60 years of age, sex is not very important to me.	A	MA	MD	D
62. I doubt if my own experiences will help to shed any light on what we are studying this semester.	A	MA	MD	D
(Posttest) I doubt if my own experiences helped to shed any light on what we studied this semester.				
63. Younger people and older people should be taught in the same classrooms.	A	MA	MD	D
64. In general, most younger people are pretty much alike.	A	MA	MD	D

x

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
65. Now that I am over 60 years of age, I am very independent.	A	MA	MD	D
66. Now that I am over 60 years of age, I look terrific.	A	MA	MD	D
67. Most older people bore others by their insistence on talking about their own experiences.	A	MA	MD	D
68. I would like to go on to take another college course after this one.	A	MA	MD	D

(Note that this item was not intended for analysis.)

x

Appendix F: STUDENT OPINION QUESTIONNAIRE,
VERSION y FOR YOUNGER STUDENTS

STUDENT OPINION QUESTIONNAIRE

Age	Sex	Last four digits of telephone No.	Last four digits of Social Security No.	Date	Section
___	___	_____	_____	____	_____

INSTRUCTIONS

This questionnaire is designed to measure your attitudes about older and younger people and about how you personally feel about aging. It has no "right" or "wrong" answers.

On the following pages, please place a circle around the letter or pair of letters that most closely corresponds to the way you feel about each statement.

For example:

The older I grow, the wiser I become. A MA MD D

Please repond to every statement, and circle only one response to each statement.

Some statements contain references to "younger people" and "older people" as groups. For the purposes of this questionnaire, please think of "younger people" as those between the ages of 18 and 25, and "older people" as those 60 years of age and older.

Other statements, such as the example shown above, refer to your own growing older. To respond to these statements, simply think of yourself in the present, looking toward your own future.

If a particular item does not apply to you or your situation, please answer it anyway, imagining yourself in that situation. An example of such a statement might be "When I retired, I felt elated."

Several statements in this questionnaire have to do with how you feel about being in a college classroom. In order to answer these questions, simply imagine that you are taking a typical college course.

If you feel that you are answering the items inconsistently, don't worry. Most people do feel that they are being inconsistent when they fill out a questionnaire like this. Please do not go back over the answers you have already given. It has been determined by researchers who design questionnaires that your "gut" response--the one that hits you first--is the response that best indicates your true feelings.

Thank you!

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
1. When I am over 60 years of age, I will be very happy to be my age.	A	MA	MD	A
2. College classes are better when they're made up of people of mixed ages.	A	MA	MD	A
3. When I retire, I will feel depressed.	A	MA	MD	A
4. When I am over 60 years of age, I will look ugly.	A	MA	MD	A
5. It is difficult to trust most younger people.	A	MA	MD	A
6. The most stimulating classroom discussions occur among people of different ages.	A	MA	MD	A
7. Most older people are very different from one another.	A	MA	MD	A
8. When I retire, I will feel that I have reached a happy time of life.	A	MA	MD	A
9. The older I grow, the more I expect to lose my health.	A	MA	MD	A
10. In a college classroom older people would probably not be able to keep up with the work.	A	MA	MD	A
11. When I am over 60 years of age, I will be busy with activities I like.	A	MA	MD	A
12. Most older people make one feel ill at ease.	A	MA	MD	A
13. I feel I am a good contributor to discussions.	A	MA	MD	A
14. When I am over 60 years of age, people will admire me.	A	MA	MD	A

y

		AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
15.	Most younger people have their own ways and have a hard time changing.	A	MA	MD	D
16.	Most older people have their own ways and have a hard time changing.	A	MA	MD	D
17.	When I am over 60 years of age, my mind will be as sharp as ever.	A	MA	MD	D
18.	In general, most older people are pretty much alike.	A	MA	MD	D
19.	Younger people and older people do not learn well together in the same classroom.	A	MA	MD	D
20.	When I am over 60 years of age, I will feel depressed.	A	MA	MD	D
21.	I would not change the rate at which time passes, even if I could.	A	MA	MD	D
22.	When I am over 60 years of age, sex will be a pleasure.	A	MA	MD	D
23.	The older I grow, the more I expect to worry about death.	A	MA	MD	D
24.	When I am over 60 years of age, I will be popular.	A	MA	MD	D
25.	College classes should be made up only of people in my general age group.	A	MA	MD	D
26.	The older I grow, the more I enjoy life.	A	MA	MD	D
27.	When I finished high school, I felt frightened.	A	MA	MD	D
28.	Most older people have nothing new to say.	A	MA	MD	D
29.	When my first child finishes high school, I will begin to worry about my age.	A	MA	MD	D

y

		AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
30.	I will not be as capable of doing college work when I am older as I am now.	A	MA	MD	D
31.	Most younger people are very different from one another.	A	MA	MD	D
32.	Most younger people bore others by their insistence on talking about their own experiences.	A	MA	MD	D
33.	When I am over 60 years of age, I will be bored.	A	MA	MD	D
34.	I hesitate to talk during discussions.	A	MA	MD	D
35.	Most older people are cheerful, agreeable, and good humored.	A	MA	MD	D
36.	Younger people have nothing new to say.	A	MA	MD	D
37.	If I could control time, I would slow it down.	A	MA	MD	D
38.	When I am over 60 years of age, I will depend on others quite a bit.	A	MA	MD	D
39.	I think I will have trouble keeping up with the reading and writing in this class.	A	MA	MD	D
	(Posttest) I had trouble keeping up with the reading and writing in this class.				
40.	When I am over 60 years of age, I will have a healthy outlook on life.	A	MA	MD	D
41.	When I become a grandparent, I will feel elated.	A	MA	MD	D
42.	When I am over 60 years of age, I will wish I were younger.	A	MA	MD	D

y

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
43. Most younger people make one feel ill at ease.	A	MA	MD	D
44. The older I grow, the more conformist I become.	A	MA	MD	D
45. Younger people often don't know what is really important in life.	A	MA	MD	D
46. The older I grow, the more I expect to decline.	A	MA	MD	D
47. Most older people are capable of new adjustments when the situation demands it.	A	MA	MD	D
48. Classes made up of only one generation of students are unnatural and limiting.	A	MA	MD	D
49. When I am over 60 years of age, people will feel sorry for me.	A	MA	MD	D
50. When I am over 60 years of age, I will feel out of shape.	A	MA	MD	D
51. The older I grow, the more individual I become.	A	MA	MD	D
52. The most stimulating classroom discussions occur among people of about the same age.	A	MA	MD	D
53. The experiences I bring into class discussions will probably help bring out important points.	A	MA	MD	D

(Posttest) The experiences I brought into class discussions probably helped bring out important points.

y

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
54. Younger people and older people would find it hard to open up in front of each other in the classroom.	A	MA	MD	D
55. When I am over 60 years of age, I will feel vigorous.	A	MA	MD	D
56. When I am over 60 years of age, I will feel forgotten.	A	MA	MD	D
57. I expect to keep up just fine with reading and writing assignments.	A	MA	MD	D
(Posttest) I kept up just fine with reading and writing assignments.				
58. The older I grow, the more my opinions are respected by others.	A	MA	MD	D
59. Most younger people are capable of new adjustments when the situation demands it.	A	MA	MD	D
60. When I become a grandparent, I will feel bad about being old.	A	MA	MD	D
61. When I am over 60 years of age, sex will not be very important to me.	A	MA	MD	D
62. I doubt if my own experiences will help to shed any light on what we are studying this semester.	A	MA	MD	D
(Posttest) I doubt if my own experiences helped to shed any light on what we studied this semester.				
63. Younger people and older people should be taught in the same classroom.	A	MA	MD	D

y

	AGREE	MILDLY AGREE	MILDLY DISAGREE	DISAGREE
64. In general, most younger people are pretty much alike.	A	MA	MD	D
65. When I am over 60 years of age, I will be very independent.	A	MA	MD	D
66. When I am over 60 years of age, I will look terrific.	A	MA	MD	D
67. Most older people bore others by their insistence on talking about their own experiences.	A	MA	MD	D

y

Appendix G: ORAL INSTRUCTIONS TO STUDENTS COMPLETING STUDENT OPINION QUESTIONNAIRE

(Material in parentheses used only in posttest)

I am here (once again) to ask you to complete a questionnaire. (As I told you last time,) the English Department has undertaken a project involving a new approach to English 2. This questionnaire was designed by the English Department as part of this project.

The answers you provide will be strictly confidential. They will not be seen by your instructor nor will they in any way affect your grade in this course.

[Hand out questionnaires.]

(You may complete the questionnaire at any time during the next two and a half hours, either before or after you have written your exam. However,) I want to take a few moments now to read through the instructions and to make sure there are no questions about how to fill out the questionnaire. So, please look at the first page and follow along while I read the instructions.

[Read instructions aloud.]

I'd like you, at this time, to fill out the information requested on the top of page one. (You can then complete the questionnaire at any time during the next two and a half hours. Be sure to turn in the entire questionnaire to the proctor before you leave the room.) Are there any questions?

Appendix H

DEPARTMENT OF ENGLISH
LEHIGH UNIVERSITY
MAGINNES HALL #9
BETHLEHEM, PENNSYLVANIA 18015
(215) 861-3310

May 6, 1981

TO: All students enrolled in English 2, Spring, 1981

FROM: Barbara H. Jensen-Osinski Barbara H. Jensen-Osinski

SUBJECT: Your participation in a Research Project

First, as director of a small research project in which you have participated this semester, I would like to thank you for completing the Student Opinion Questionnaire that was administered at the beginning and end of classes. Your help has been essential to the project and is truly appreciated. I would like you to know something about the reason you were asked to fill out the questionnaire.

From January to the present, all five sections of English 2 have taken part in an experiment, sponsored by Lehigh's Department of English and funded by the NRTA-AARP Andrus Foundation, entitled "The Graying of the College Classroom: Impact of Older People as Peers in the Classroom on Attitudes and on Performance of Undergraduates." As you are aware, Judy Aronson has been observing in all five sections, and all of you have been asked to complete a questionnaire. During the summer we will be analyzing the effects of the intergenerational classroom situation on the attitudes of both younger and older students toward aging, toward younger and older people as groups, and toward their own ability to learn in a college environment. We will also be analyzing the effects of superimposing the theme of the life cycle as seen in literature on students' attitudes toward aging and older persons.

During the semester, Sections A and D were designated as the "experimental" sections. The life cycle theme was used in these two sections as an approach to 20th-century American literature. Section D, the intergenerational class, was composed of 14 Lehigh freshmen and 10 older students from off campus. Sections B, C, and E were unaffected by the project except that they completed the questionnaire and were observed from time to time. Needless to say, without the participation of students in all five sections, we could not have conducted the experiment.

A final report of the project's findings will be published early next semester. If you are interested in receiving a copy of the report summary, please write your name and (fall) mailing address on the tablet provided.

Thank you, again, for your most valuable cooperation. Have a wonderful summer!